Learning disabilities in dropout delinquent adolescents. Differentiating between characteristics of dropout delinquent and school-going adolescents

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Abstract

The aim of this study is to examine and compare the occurrence of specific learning disabilities as they appear in dropout delinquent adolescents as compared with adolescents enrolled in regular school. The work is based on research that indicates that specific learning disabilities may exist in dropout delinquents. The study examines the evaluation records of two populations with learning disabilities treated in a psycho-educational center in Israel – delinquent dropouts and school-going adolescents. Our research hypothesis was that the characteristics of learning disabilities would be different between the two groups, and that this difference would be expressed in the frequency in which specific characteristics were present in dropout delinquent adolescents in comparison to the same characteristics in the school-going pupils. The findings indicate significant differences between the two groups in the frequency of certain types of disabilities in visual perception, reading, and language. This research does not address the causality of these differences but rather uses them as approaches for designing therapeutic intervention for the dropout-delinquent population.

Key words: learning disabilities, adolescents, dropout delinquent

Although the relationship between learning disabilities, behavioral disorders, socio-emotional disturbances, and delinquency has been explored extensively, the nature of their mutual causality is not clear. Rourke's (1988) conclusions regarding the relationship between learning disabilities and socio-emotional disturbances may serve as a point of departure for our investigation. "The efforts to clarify the relation between learning disabilities and socio-emotional disturbances should eschew the 'contrasting groups/unitary deficit' approach in favor of research efforts that deal adequately with the heterogeneity of the learning disabled population, both with respect to patterns of abilities and deficits and with respect to distinctive forms and manifestations of psychopathology" (p. 807).

The present study was another attempt to examine the nature of the learning disabilities found in dropout adolescents as compared with those in adolescents enrolled in school. To do this, the relationship between socio-emotional status (dropout versus school-going adolescents) and learning disabilities will be investigated.

The research hypothesis was that dropout delinquent and school-going adolescents would differ in learning disability characteristics. The difference would be expressed in the frequency of certain characteristics, assumed to be more frequent in dropout delinquent adolescents than in the school-going population.

Until the 1980s, learning disabilities were thought of as "childhood diseases," something that appears in kindergarten and elementary school, mostly characterized by difficulties in acquiring the basic skills of reading, writing, and arithmetic, and accompanied by phenomena such as hyperactivity. Since 1990 a change has taken place, with parents and therapists observing that the first symptoms of disabilities appear in infancy, and that they do not vanish in adolescence (Patton & Polloway, 1992).
When the disability is specific and minor, appropriate therapy in the early years will usually improve the child's functioning. A more severe disability will continue to constitute a problem in learning and adaptation processes even during adolescence and adulthood (Regev, 1993).
The research (Brumback, 1990; De Munter & Ghesquiere, 1999; Gibbs & Cooper, 1989; Lewis & Lawrence-Patterson, 1989; Margalit, 1990, 1995; Margalit & Tur-Kaspa, 1998; Morrison & Cosden, 1997; Pearl, 1992; Rourke, 1988; Sharoni, 1993; Shesh, 1996; Tsatsanis, Fuerst, & Rourke, 1997; Vaughn & La Greca, 1992), indicates that a high percentage of children with learning disabilities also has social and emotional difficulties. Teachers of children with learning disabilities reported that the children display nonadaptive behaviors, feel a lack of confidence and depression, are rigid and socially withdrawn, have lower task-orientation, and exhibit poor verbal expression and a lack of organizational skills. These characteristics result in feelings of ongoing anxiety, frustration, lack of confidence, and low self-esteem.

Adolescents who drop out of school and socially detached adolescents are problems known in Israel, as they are worldwide. A dropout is defined as a young person who had dropped out of school prior to completing the 10 years of compulsory education mandated by Israeli law. Most of these teenagers, ranging in age from 15 to 18 years, do not work or study, and those who do work hold unskilled or casual jobs. They usually come from large families of low socioeconomic status. They are referred for diagnosis and treatment by various welfare agencies, often after a long history of failures and transfers from one educational framework to another, and sometimes they are not involved in any framework whatsoever (Gottlieb & Brainin-Porat, 1987; Lahav, 1993, 1994, 1999; Romi, 2001, Romi & Tal-Bar-Lev, 2001).
Over the years, different terms have been used to describe this population. Lahav (1993) records the terms, "street youth", "marginal youth", "street gangs", "youth in distress", and "detached youth" as having been used in Israel. In other parts of the world terms for these adolescents included "school-disadvantaged dropouts", "delinquent youth at risk", "gangs", "street-corner groups", "juvenile delinquent youth", and "unattached youth". Lahav (1994) described stages in the process of detachment of these young people from their studies in school and their relationships with formal frameworks through rejection and vagrancy, resulting eventually in delinquency. In a recent survey of dropout delinquent adolescents in Israel, Kahan-Strawczynski, Dolev, and Shemesh (1999) found that most of them were from single-parent families with socioeconomic difficulties, parental unemployment and elementary education or less, violent families with alcohol or drug abuse, prostitution, or criminal activities. The youngsters themselves have had brushes with the law, and some have police records.

Brier (1989) reports that about 36% of convicted offenders have learning disabilities. The number of adolescents who have committed offenses and have learning disabilities is twice that found among youngsters who do not have learning disabilities.
Brier (1989) states that the criminal justice system treats youths with learning disabilities differently and more severely than it does youngsters without learning disabilities, even when they are arrested for the same type of offense. Teenagers with learning disabilities lack strategies to avoid detection. They are unable to present themselves effectively during encounters

with juvenile justice personnel, and fail to comprehend the proceedings adequately. Individuals with language-based disabilities have poor communication skills. Their vocabulary is often limited, and not always socially acceptable. Further, they may have additional problems which need time to be addressed appropriately.

Keilitz and Dunivant (1986) conducted cross-sectional and longitudinal studies of samples of adolescent males from public schools, juvenile courts and correctional facilities. The results confirm the school failure theory, the susceptibility theory, and the differential treatment theory – theories stressing a causal relationship between learning disabilities and juvenile delinquency. Adolescents with learning disabilities had significantly higher rates of general delinquent behavior; they engaged more in violence, substance abuse, and school disruption than did adolescents without learning disabilities. The likelihood of arrest and adjudication was also substantially higher for adolescents with learning disabilities.

An investigation conducted by Malmgren, Abbot, and Hawkins (1999) tried to avoid the difficulties pointed out by Keilitz and Dunivant (1986). Their findings did not confirm a direct relationship between learning disabilities and delinquency, and they suggest that the finding of a direct relationship revealed in earlier studies may have been a result of confounding the learning disability status with age, ethnicity, or socioeconomic status. They also claim that neither Hinshaw (1992) nor Maguin and Loeber (1996) confirm the hypothesized role of learning disabilities, defined as a category of disability, in the development of juvenile delinquency. Furthermore, they state that the evidence available regarding the link between learning disabilities and delinquency is hampered by methodological concerns. They assert that only a few researchers have utilized school-going control groups when measuring the frequency of learning disabilities in delinquent populations. This is a significant point for those studies revealing the frequency of learning disabilities in institutionalized delinquent adolescents. Comparing a learning-disabled group of delinquents to typical high-school students is most probably misleading.

A study by Kortering and Braziel (1998) compared two groups of school dropouts: 35 youths with learning disabilities, and 60 without them. The two groups were comparable on most measures of family background, school experiences, and post-school outcomes. Some differences were found in family intactness, current job titles, and future ambitions.

A study by Doren, Bullis and Benz (1996) showed that individuals identified with serious emotional disturbance (SED) or specific learning disabilities (SLD) were more likely to be arrested sometime while they are in school, than individuals with disabilities who were not identified as SED or SLD.

The recently completed National Longitudinal Transition Study (NLTS) examined a host of transition outcomes for persons with disabilities, including arrest status (Wagner, D'Amico, Marder, Newman & Blackorby, 1992; Wagner et al., 1991). These findings indicated that 19% of all adolescents with disabilities had been arrested by the time they were out of school for two years. Participants in the study identified as SED or SLD showed the highest arrest rates (37% and 20%, respectively), while arrest rates for other adolescents with disabilities ranged from 15% for those identified as speech impaired to 3% for those identified as having orthopedic impairments. In addition, the NLTS reported that males with disabilities were arrested at a higher rate (25%) than females with disabilities (7%), and adolescents with disabilities who had dropped out of high school exhibited higher arrest rates (37%) than those who had not dropped out (7%).

Despite the ambiguity, there are a number of explanations for the link between learning disabilities and delinquency. Brier (1989) suggests a multi-factor explanation based on the school failure hypothesis. He describes the process: "As a result of neurological dysfunction, individuals with a learning disability seem to be more likely than non-learning disabled individuals to display several of the language, social perception, and social relationship difficulties that have been found to contribute to the development of antisocial behavior. Interaction between these attributes and other factors known to generally predispose individuals to delinquency increases the likelihood of arrest, adjudication and offender status" (p. 551).

Briney and Satcher (1996) discussed the relationship between students with learning disabilities and delinquency and the implications for the vocational rehabilitation process, listing four hypotheses as part of their explanation. They began with the school failure hypothesis, which postulates that a learning disability leads to school failure leading to rejection, a negative self-image, and frustration resulting in school dropout and delinquency. Next, they presented the susceptibility hypothesis, according to which deficits in language and in reading and math skills, tend to establish a pattern of delinquency. The third hypothesis was the differential treatment hypothesis, which suggests that youths with learning disabilities are treated differently by teachers, police and social workers, increasing the likelihood for arrest and/or adjudication. Finally, the social cognitive ineffectiveness and social maladjustment hypotheses suggest that difficulties in social cognitive problem-solving skills are associated with social maladjustment.

Sharoni (1993a) pointed to two explanations: First is the causal sequence, which lists several variables on the continuum of learning disabilities and delinquency. These variables include poor academic achievements, high frustration level, low self-esteem, being perceived as a disciplinary problem by adults, being perceived as socially awkward by peers, being labeled as problematic students, being placed in inappropriate frameworks, associating with peers who are hostile to school, prone to delinquency, and to dropping out of school, and absenteeism, suspension, and delinquent behavior. The second explanation is the direct link. Accordingly, there may be behavioral and personality variables inherent to certain types of learning disabilities, and these may predispose/increase the tendency toward delinquency. These variables are coupled with a poor perception of social cues. Both explanations are unsatisfactory as they are based on observational school records and other qualitative clinical records but have not been examined empirically.

Sharoni (1993b) summarized the issue of susceptibility as one hypothesis mentioned in the literature for delinquent behavior. This hypothesis argues that children with learning disabilities have certain cognitive and personality features (e.g., general impulsiveness, unable to learn from experience, poor perception of social cues) that cause them to fall more easily into a delinquent pattern. These features can be part of the symptoms of a learning disability and a contributing factor to the development of delinquent behavior.

The findings discussed so far indicate a relationship between learning disabilities, dropping out, and delinquency. However, these studies do not clearly indicate whether adolescents with learning disabilities who are involved in criminal activity, displayed different patterns of learning disabilities than did adolescents with learning disabilities who were not involved in criminal activity.

The findings indicate a possible significant link between learning disabilities and juvenile delinquency. At the same time it appears that certain behavioral traits and personality characteristics are often associated with certain types of learning disabilities, and these, in turn, may lead to delinquency. There also may be behavioral and personality characteristics in certain types of learning disabilities which lead to delinquency. An examination of this issue requires an examination of specific characteristics of learning disabilities of the dropout delinquent.

The research hypothesis was that there would be a difference between dropout delinquent adolescents and school-going adolescents with respect to the disability characteristics. The difference would be expressed in the frequency of certain characteristics in the dropout delinquent compared with school-going adolescents.

Methods

Research participants

The sample is composed of assessment records of adolescents taken from a psycho-educational evaluation center located in an academic college, and consisted of two groups, each of 20 boys. Group1 consisted of dropout delinquent boys and Group 2 of boys enrolled in junior high school and high school. Members of Group 1 lived in hostels supervised by the Youth Probation Authority, and ranged in age between 13-15. The period of detachment from regular educational settings was between 2-3 years. The youths were referred to the hostels by various welfare authorities, frequently following a court decision. In this group, 17 boys lived with both parents; the father of one boy had died, another boy was of a single-parent family, and the father of a third was serving a long-term prison sentence. In 8 of the parent couples (40%) both spouses were employed; in 9 of the couples (45%) only one parent worked and of the 3 remaining couples, neither parent was employed. There was no indication of these youths receiving any assistance. Members of Group 2 were enrolled at regular schools. They had been assessed due to various learning difficulties, and their ages ranged from 13.1-16.5. The parents of 18 of the boys were employed (90%), with two mothers stating that they were housewives whose partners were employed. It was noted that 12 of these youths received some type of help with their schoolwork during the course of their studies.

All of the Group 2 boys were defined by their teachers as having learning difficulties, and were considered to be at risk of developing learning disabilities. The didactic assessment was conducted at the Psychoeducational Diagnostic Center, following regulations posted by the Ministry of Education (1996) for this procedure.

The level of intelligence could not be examined, as these data were confidential. However, another study conducted at this center, in which adolescents were studied randomly, showed that all those studied had an intelligence level within the normal range (Romi & Marom, in press).

The groups were matched by age, time of evaluation (during the years 1991-1995), and examiner.

Measures

The assessment consisted of a comprehensive battery of tests. Most of the accepted tests in Israel are assessment tests without significant norms. The final report constitutes an accepted reference for determining the existence or nonexistence of a learning disability.

The educational assessment covered 1) visual perception, memory, spatial relationship and organizational skills (Rey Complex Figure), 2) auditory perception and auditory memory for words and numbers, 3) language skills such as phonological awareness, phonological coding, morphology, syntax, and semantics (informal tests) and 4) specific components of reading skills: vowel recognition, letter and word recognition, reading global words, reading sentences, reading pseudo-words. These measures are critical building blocks in gaining meaning from print.

The reports were written by pedagogic educational assessors, all of who were senior teachers with many years (M = 18) experience in special education. The assessors all have extensive knowledge and experience with children with special needs, and are highly qualified to identify the characteristics of children with learning difficulties. The research assistants had taken a special two-year course and had learned the theories of educational assessing and assessing tools. The assessors' reports served as the database for the present study and for the purpose of comparing the groups. The readers that performed the discourse analysis of the assessment were research assistants studying for their BA in special education. They were trained by the

researchers to read such reports and perform a discourse analysis on the written reports according to the 5-parameter criteria. The parameter criteria for assessing the reports were selected on the basis of findings from other studies as presented in the next section of our study.

Procedures

An interview with three experts in psychological and learning assessment of learning disability and an exploration of the relevant literature (Siegel, 1999), yielded five criteria for characterizing the learning disabilities: 1. Absence of compensatory mechanisms – youngsters with learning disabilities in a particular area are often able to compensate for the specific disability by using other cognitive, social or emotional functions in which they are stronger; 2. Visual perception disabilities – difficulties in directionality, spatial orientation, and organizational skills; 3. Viewing reading disabilities as a global deficiency, leading to various disabilities in other fields connected to reading; 4. Language disabilities – lack of language knowledge, vocabulary, pragmatics, and inability to communicate in context, failure to understand instructions and follow them; 5. Multiple disabilities.

The method used was discourse analysis, with each record read and analyzed by two readers, working independently of each other. Relevant statements, written by the assessors describing the existence of difficulties in the aforementioned parameters, were taken from the written reports. The comparison was based on the five parameters listed above and on agreement between the two research assistants. Only statements that were agreed upon by both researchers were entered into the study.

The limited scope of the sample which encompassed all the evaluations of the identified dropout adolescents examined at the Psychoeducational Evaluation Center (a pilot project), dictated that only three parameters were included at the final stage of the study. These three parameters – visual perception, reading, and language disabilities – which were expressed in the reports, enabled a comparison to be made between the groups, as presented below. Although the other two parameters were represented, their degree of representation was not valid enough to be used as a measure for comparison.

The statements were taken from the reports as follows:

Statements attesting to the existence of a visual perception problem. Visual perception problems were characterized as directionality, spatial orientation, and organizational skills:

- A difficulty was found in spatial organization and directions.
- A difficulty was found in getting organized for a task.
- A difficulty was found in organization in the child's life environment.
- The child does not utilize organizational strategies.
- Difficulty in organized collection of details in logical fashion.

Statements attesting to the existence of a reading problem:

- Difficulty in reading with vowels, slow reading, not taking punctuation into account.
- Does not identify vowels, except for "kamatz" and "patach" (diacritics).
- Complains that he cannot see the words – everything looks like a black mess.
- Less familiar words are read erroneously.

Statements attesting to the existence of a problem in the area of language (i.e., vocabulary, knowledge of the language and pragmatics):

- Significant difficulty in raising ideas and synonyms from the vocabulary.
- The child has a very poor vocabulary.
- The child speaks very little, pronunciation problems.
- The child has great difficulty in speaking freely.
- Literal definitions and abstractions are on a very low level.

The statements taken from the evaluations were counted and a summary was prepared for each group separately.

Results

The tests administered to the participants were not all of the same type. Therefore, we did not want to perform an analysis that requires a mean of the three measurements, and preferred to examine the differences between the groups separately for each measurement using three *t* tests. However, we conducted an analysis of variance comparing the three measurements. Our final analysis addresses the comparison between the three measurements and not their means.

The main hypothesis was that the dropout group would be found to have more learning disabilities than the school-going group, in visual perception, reading, and language. In order to examine the hypothesis we conducted a t-test for independent samples.
Another question of interest was a comparison between the three parameters of learning disabilities. In order to answer that question we conducted a (mixed-model) ANOVA.

Differences in learning disabilities

The averages and significant tests for the three parameters of learning disabilities (visual perception, reading, and language) are presented in Table 1, which also presents standard deviations. Both present a similar pattern for all three parameters. The rate of specific learning disabilities was higher in the dropout group. This pattern was compatible with the research hypothesis.

Results showed that there were significant differences between the two groups in all learning disability parameters, hence the main hypothesis was fully confirmed: the detached teenagers had more learning disabilities than the other group in all three parameters examined (visual perception, reading, and language).

Table 1
Means, standard deviations and significance tests for the three parameters of learning disabilities according to the different research groups

	Nondelinquent ($n = 20$)	Dropout ($n = 20$)	Across both Groups ($n = 40$)	$t_{(df)}$
Visual perception	0.60	1.10	0.85	$1.89_{(38)}$*
	(0.68)	(0.97)	(0.86)	
Reading	1.20	2.85	2.03	$4.31_{(38)}$**
	(1.06)	(1.35)	(1.46)	
Language	0.60	2.95	1.78	$6.25_{(38)}$**
	(0.88)	(1.43)	(1.67)	

Note. * $p < 0.1$; ** $p < 0.05$

Difference between the three parameters of learning disabilities

We conducted a two-way (mixed-model) ANOVA (learning disabilities parameter group) and found a significant main effect of learning disability measure ($F(2,76) = 11.82$, $p < 0.01$). In order to test the source of the effect we used a contrast procedure and found that across both groups there were significantly more reading errors than visual perception errors ($F(1,38) = 15.75$, $p < 0.01$). Furthermore, across both groups there were significantly more language errors than visual perception errors ($F(1,38) = 15.75$, $p < 0.01$).We did not find a significant difference between the language errors rate and the reading errors rate.

We also found a significant interaction (parameter group) effect ($F(2,76) = 6.73$, $p < 0.01$). In order to test the source of the interaction we used a contrast procedure and found the discrepancy in reading between school-going youths and detached children was higher than the corresponding visual perception discrepancy ($F(1,38) = 15.43$, $p < 0.05$). Furthermore, the discrepancy in language between school-going and dropout adolescents was higher than the corresponding visual perception discrepancy ($F(1,38) = 15.75$, $p < 0.05$).

The language discrepancy between the school-going and the dropout group did not differ significantly from the reading discrepancy ($F(1,38) = 15.75$, $p < 0.05$). This could be explained by the significant correlation between reading and language components (phonology, vocabulary). The error rates of all three parameters were higher for the dropout group than for the school-going group. This discrepancy was especially prominent with regard to reading and language, and mild with regard to visual perception. Across all groups, the highest error rate was found for reading.

Discussion

The findings show a significant difference between the characteristics of learning disabilities of dropout adolescents and school-going adolescents in visual perception, reading, and linguistic perception. Further analysis reveals that the most significant gap between the groups was in reading, next, in linguistics, and the narrowest gap was in visual perception. These findings testify to the eminence of "detachment" in dropout youth. Reading enables people to gather important and beneficial information for more successful functioning. Therefore, the inability to read hinders the degree of exposure that these adolescents have to the wealth of information that could increase their coping skills. This in turn obstructs the youth's ability to function both in the personal and the interpersonal sphere. According to Brier's model (1989), reading is the basis of all learning in school, and failure to read could lead to global failure in learning achievements resulting in drop out and detachment.

Linguistics include vocabulary and linguistic knowledge. Youths with learning disabilities in the linguistic area find themselves in situations in which they may not understand instructions given to them, possibly leading to inappropriate speech and actions. They will probably have difficulties explaining themselves and justifying their actions, and this may worsen the dropout youth's situation.

The studies mentioned in the literature review showed this to be a problem for dropout youths, and the current findings confirm it. These youngsters lack the ability to explain themselves properly when they are in court or at the police station. They have difficulties explaining their side of the story and understanding the questions and warnings given to them by the system (Keilitz & Dunivant, 1986). Indeed, as linguistics constitute a basis for skills and knowledge, a disability in this area may influence additional domains in the adolescents' lives.

The study findings perhaps note a different direction than the claim raised by Morrison and Cosden (1997), that learning disabilities are not a cause of self-risk and that the disabilities

themselves are not the exclusive cause of detachment and/or delinquency. They claimed that it is the interaction between learning disabilities and internal and external factors which shapes the inner form of delinquency and emotional disturbance.

The findings, which should be reexamined in a larger sample, indicate that the characteristics themselves form a significant element in edging the adolescents toward additional risk factors, thus increasing the probability of their becoming further detached and delinquent. The acute learning disability traits of detached youth interact with the alienated and difficult environment and thereby return to the diverse variations that Morrison and Cosden (1997) consider in their discussion on learning disabilities in relation to delinquency.

The present study confirms that there are significant differences between characteristics of specific learning disabilities of school-going youth and those of dropout youth with learning disabilities. These differences require further investigation in other fields of activity, such as learning to use a computer or coping with daily events. What emerges from these findings is the need to establish an intervention program, one that is different for each of the various populations of adolescents with learning disabilities, and relates to the diverse meanings of these disabilities.

These findings illustrate the importance of pedagogical, didactic intervention for dropout delinquent and school-going youngsters. This intervention should supplement the traditional behavioral and emotional interventions commonly offered. Didactic educational intervention can moderate the learning difficulties and enhance the coping abilities of adolescents with disabilities in their environment.

Furthermore, in a number of tests given to the school-going group, several statements show evidence of the existence of a compensation system that did not appear in the tests of dropout youths. Since a clear conclusion regarding the exact character of this dimension could not be reached, it was not examined and therefore could not be given as a finding in this present study.

Finally, future studies should be conducted in larger samples so that more parameters can be examined in relation to these two groups.

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