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# Locus of control and emotionally disturbed children

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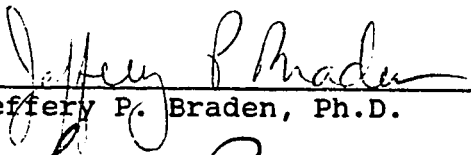
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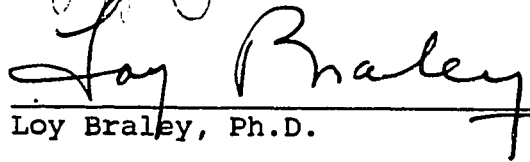
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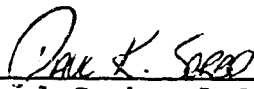
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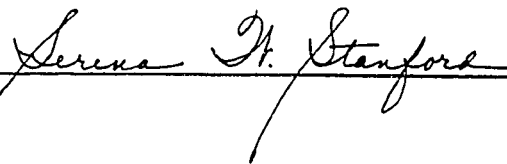
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Locus of Control  
and Emotionally Disturbed Children

Michael Harper

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Running Head: LOCUS OF CONTROL



## ABSTRACT

LOCUS OF CONTROL  
AND EMOTIONALLY DISTURBED CHILDREN

by Michael C. Harper

The locus of control (LOC) dimension was examined in a population of emotionally disturbed children living in a residential treatment facility. The attempt was made to relate an external locus of control to specific DSM-III-R diagnoses and to the taking of psychotropic medication. Using the Nowicki-Strickland Locus of Control Scale for Children, data were collected with respect to LOC orientation in two diagnostic groups. The diagnostic groups studied were Depression/Dysthymia and Oppositional Defiant Disorder/Conduct Disorder. The results showed no significant relationship between an external LOC and specific diagnosis. Non-significant findings were also found in relating medication levels with external LOC. Reasons for and implications of these non-significant findings are discussed.

Locus of Control  
in emotionally disturbed children

Locus of control (LOC) is a construct which describes the degree to which an individual views behavior and behavioral contingencies as being under personal control (Rotter, 1966). According to Rotter's theory, an external locus of control is defined by individuals' belief that their destiny is controlled by outside forces, such as, luck, fate, or powerful others. "Externals" view their behavior as being consistently influenced by reinforcements which are uncontrolled or random in nature. In contrast, individuals who consistently view their behavior as affecting environmental responses are understood to have an internal locus of control. The terms "internal" and "external" do not suggest that a person is entirely one way or the other. Rather, they depict an individual's tendency to expect events to be contingent upon or independent of his or her behavior (Foon, 1987). The locus of control dimension is traditionally defined on a continuum with high internality and high externality at the extremes (Skinner & Chapman, 1987).

Individuals with an internal locus of control have been demonstrated to be more perceptive, more inquisitive and higher achievers than their "external" counterparts (Lefcourt, 1976). In addition, "internals" are more able to delay in gratification (Erikson & Roberts, 1971).

Lefcourt (1976) thus postulates that an internal locus of control is important for effective coping behavior, and is a desirable orientation for individuals, especially children.

In contrast, an external locus of control in children has been associated with a variety of emotional and behavioral disturbances, including hyperactivity (Linn & Hodge, 1982), depressive symptomatology (Lefkowitz & Tesiny, 1980; Leon, Kendall & Garber, 1980; Mullins, Siegel & Hodges, 1985), Attention Deficit Disorder (Borden, Brown, Jenkins & Clingerman, 1987) and Learning Disability (Bendell, Tollefson & Fine, 1980; Hallahan, Gajar, Cohen & Traver, 1978).

The majority of research relating locus of control to emotional and behavioral disturbance in children has occurred in classroom settings. Consequently, the emotional and behavioral disorders which have been studied have been similar to some degree. This similarity arises in the existence and prevalence of self-defeating behavior and thought patterns such as inattentiveness, overactivity, impulsivity and a tendency to possess a poor self concept (Bryan & Bryan, 1977). Locus of control has also been highly correlated with these behaviors. Thus, because these patterns of behavior are readily identifiable in the school environment, the focus of locus of control research in children has been skewed such that the identified disorders which show a significant relationship with

external locus of control (childhood hyperactivity, Attention Deficit Disorder and Learning Disability) have a common element in these self defeating behaviors and thoughts.

The question which follows is whether the relationship between external locus of control and emotional disturbance is maintained in those disturbances not highly correlated to school difficulties. When such a severely disturbed population has been observed, emotional/behavioral disturbance has been discussed as a homogenous variable rather than as a function of specific diagnoses. When this bulk categorization has been used, nonsignificant findings have been reported in relating external locus of control and emotional/behavioral disturbance (Kendall, Deardorff, Finch & Graham, 1976; Unruh, Cronin & Gilliam, 1987). These findings, in conjunction with previously cited research, indicate that the locus of control dimension is related to some emotional disturbances while being unrelated to others.

This present study improves on previous research in two ways. First, a related subject population is identified outside of a school setting. The locus of control dimension is examined in emotionally disturbed children living in a residential treatment facility. This provides relevant information on a population which has been largely ignored to this time, and provides a strong test for the relationship between emotional disturbance and

locus of control. Second, a distinction is made between specific DSM-III-R diagnoses, rather than examining the entire population as one group of "emotionally disturbed children." The inclusion of this distinction seeks to clarify previous nonsignificant findings (which failed to distinguish classes of emotionally disturbed children by diagnosis).

Specifically, four hypotheses are tested.

1. Children with the DSM-III-R diagnosis Depression/Dysthymia differ from those children with the DSM III-R diagnosis Oppositional Defiant Disorder/Conduct Disorder with respect to their locus of control orientation.

2. Both Depressive/Dysthymic and Oppositional Defiant/Conduct.Disordered diagnostic groups will demonstrate a more external locus of control orientation than a normal population.

In addition to LOC being related to the aforementioned disturbances, Linn and Hodge (1982) proposed that hyperactive children taking stimulant medication to control their condition may acquire an external locus of control, because they believe that the medication is the controlling factor in their behavior. Linn and Hodge, however, did not empirically test this hypothesis. Thus, in this study, information on whether or not the subjects are on medication is noted and the following two hypotheses are also tested.

3. Emotionally disturbed children taking

psychotropic medication differ from other emotionally disturbed children who are medication free in their locus of control orientation.

4. There is no interaction between specific DSM-III-R diagnostic categories studied and the taking of psychotropic medication with respect to locus of control orientation in emotionally disturbed children.

#### Method

##### Subjects

The subjects were 34 emotionally/behaviorally disturbed children living at a residential treatment facility. Both males and females participated in the study, although the majority of subjects were males. Subjects ranged in age from 9-14 years. Subjects diagnosed as having Major Depression/Dysthymic Disorder comprised one diagnostic group, and those diagnosed as having Oppositional Defiant Disorder/Conduct Disorder comprised the other. The groupings were made according to the similarity of diagnosis. The subjects were free of gross neurological or uncorrected sensory impairments.

##### Materials

Data were obtained from client files to identify individual diagnoses. An individual's diagnosis is determined by agency therapists in conjunction with a consulting psychiatrist within the first four weeks of admission to the facility. These diagnoses are reviewed on a quarterly basis. Principle Axis I diagnoses were used

for assignment purposes, unless an overriding Axis II diagnosis was warranted. As mentioned, there were two categories of diagnosis: Depression/Dysthymic Disorder and Oppositional Defiant Disorder/Conduct Disorder.

Locus of control measures were obtained using the Nowicki-Strickland Locus of Control Scale for Children (NSLCS-C) (Nowicki & Strickland, 1973). This scale is a 40-item, pencil-and-paper, forced choice (yes or no) questionnaire designed to measure the generalized locus of control orientation of children. The NSLCS-C can be administered individually or in groups. A high score on this measure reflects an external locus of control.

At the time of the administration of the questionnaire, treatment facility staff were asked if subjects were on medication. The medication levels were "yes" or "no."

#### Procedure

Subjects were administered the NSLCS-C in groups of 1-3. This group size was chosen both for convenience, and to minimize the possible occurrence of "acting out" behavior during the collection of data. When a subject's reading comprehension was determined to be a problem, the questions were read to the subject. Otherwise, subjects read and answered questions on their own.

#### Results

Using the published norms for this questionnaire (Nowicki & Strickland, 1973), the obtained scores were

normalized to a scale with a mean of 100 and a standard deviation of 15. Because the norms are age based, this procedure adjusted the experimental scores to correct for locus of control differences being a function of age. To repeat, a higher score on the locus of control measure indicates a more external locus of control orientation.

The means and standard deviations for all groups are listed in Table I. To test for main and interactive effects of diagnosis and medication, a 2 (diagnostic category) X 2 (psychotropic medication) ANOVA was calculated at an alpha level of .05. The results of the ANOVA are shown in Table II. As demonstrated, the group mean for Depression/Dysthymia was more external than the group mean for Oppositional Defiant Disorder/Conduct Disorder. This difference, however, was not significant [ $F(1,33) = 3.11$ , non-significant]. The main effect for medication was also not significant [ $F(1,33) = 1.14$ , non-significant]. Thus, there is no support for the hypothesis of Linn and Hodge (1982) that taking psychotropic medication to control a psychological condition might contribute to the acquisition of an external locus of control in children.

The interaction between medication level and specific diagnosis on the locus of control dimension was not significant [ $F(1,33) = 1.15$ , non-significant].

A two-tailed  $t$ -test was performed to determine whether the mean for on each diagnostic category differed from age



TABLE I  
Means and Standard Deviations of  
Locus of Control Scores (N=34)  
Mean (SD)

	Diagnosis		<u>Total</u>
	<u>Dep./Dys.</u>	<u>ODD/CD</u>	
<u>Medication</u>			
Yes	97.5 ( 9.3) n=5	95.8 (12.3) n=8	96.4 (11.3) n=13
No	108.7 (11.9) n=10	96.5 (15.3) n=11	102.3 (15.0) n=21
			<u>Grand Total</u>
<u>Total</u>	105.0 (12.4) n=15	96.2 (14.0) n=19	100.1 (14.0) N=34

Note: The Depression/Dysthymia group is abbreviated by Dep./Dys. The Oppositional Defiant Disorder/Conduct Disorder group is abbreviated by ODD/CD.

TABLE II  
2 (medication) X 2 (diagnosis) Analysis of Variance

	<u>Sum of Squares</u>	<u>dF</u>	<u>Mean Square</u>	<u>F</u>	<u>Signif. of F</u>
<u>Main effects</u>	860.27	2	430.14	2.31	.116
Medication	211.56	1	211.57	1.14	.295
Diagnosis	579.07	1	579.07	3.11	.088
<u>2-way inter.</u>					
Med. x Diag.	213.74	1	213.74	1.15	.292
<u>Error</u>					
Explained	1074.01	3	358.00	1.93	.147
Residual	5578.38	30	185.95		
Total	6652.39	33	201.59		

norms (Nowicki & Strickland, 1973). Again, the alpha level was set at .05. The results from the  $t$ -test are listed in Table III. As can be seen, neither of the diagnostic categories proved to be significantly more external than the population mean.

### Discussion

The results support previous research on locus of control, which states that emotional/behavioral disturbance, when viewed as a homogenous variable, does not significantly relate to an external locus of control. As shown in Table I, the overall mean of the subject population was 100.1. This is quite similar to the normal population mean of 100. In this case, therefore, the locus of control dimension did not provide a reliable test for the existence of emotional/behavioral disturbance in children. It appears as if ED/BD and locus of control are independent constructs.

This present study was not successful in showing a relationship between external locus of control and specific DSM-III-R diagnoses. In addition, there was no significant difference between either of the diagnostic categories with respect to locus of control orientation. However, due to the limited number of subjects, it is possible that a Type II error may have occurred in detecting both a statistically significant difference between diagnoses and in finding that the Depression/Dysthymia group was significantly more external

TABLE III  
Individual  $t$ -tests on Diagnostic Groups  
Compared to Normal Population

<u>Diagnosis</u>	<u>Mean Score (SD)</u>	<u>t-score</u>	<u>dF</u>	<u>Significance Level</u>
Depression ( $n=15$ )	105.0 (12.4)	1.56	14	.20 > $p$ > .10
ODD/CD ( $n=19$ )	96.2 (14.0)	1.18	18	.30 > $p$ > .20

Note: The compared normal population had a group mean of 100 (15).

The Depression/Dysthymia group is abbreviated by Dep./Dys. The Oppositional Defiant Disorder/Conduct Disorder group is abbreviated by ODD/CD.

than the normal population. In calculating the significance level of the main effect for diagnosis, the ANOVA indicated there might have been a statistically significant effect, but that the study lacked the power to detect this. The same type of error possibly could have occurred in the  $t$ -test examining the significance of the difference between the Depression/Dysthymia subject group and the normal population. Based on the previously discussed research relating external locus of control with depressive symptomatology, the existence of a Type II error in this case is probable.

Despite the potential presence of Type II errors, the most confident conclusion that can be made based on the present findings is that there is no significant difference between specific DSM III-R diagnostic categories on the locus of control dimension. Additionally, neither Depression/Dysthymia nor Oppositional Defiant/Conduct Disorder diagnostic groups are significantly more external in their locus of control orientation than a normal population. Furthermore, there was no evidence to support that the use of psychotropic medication might lead to external locus of control in emotionally disturbed children.

These facts further assert that locus of control and emotional/behavioral disturbance are independent constructs. Being labelled emotionally disturbed, regardless of diagnosis, does not ensure that the

individual will have an external locus of control. Upon reflection, this is not surprising. When a client is categorized using DSM-III-R criteria, the client must satisfy a myriad of criteria to be labelled with a specific diagnosis. It is not reasonable to assume that the locus of control dimension could correlate with multiple and sometimes conflicting diagnostic criteria. Because emotional disturbance is such an individualized and varied condition, it would be beneficial to look at those disturbances related to external locus of control to see if there are any common factors that can be identified to direct the future use of the locus of control dimension.

The previously observed connection between LOC and emotional disturbances hinges on the existence of self-defeating behaviors and attitudes (Omizo, Cubberly & Longano, 1984). Such behaviors are related to the disorders which are prevalent in the school setting (hyperactivity, Attention Deficit Disorder, and Learning Disability).

Childhood depression, another malady which has been associated with an external locus of control, is often presented by masked symptoms such as hyperactivity, aggressive behavior, psychosomatic disturbance, delinquency, and temper tantrums (Lefkowitz & Tesiny, 1980). Again, it appears as if a series of self-defeating behaviors are the identifying element. Lefkowitz, Tesiny and Gordon (1980) postulate that the relationship between

childhood depression and external LOC is due to a learned helplessness condition with the child. Children may learn that control over reinforcement is external, and their efforts result in no changes in their environment.

Thus, in those research situations in which there has been success in relating the locus of control dimension to various childhood problems, the common factor appears to be the existence of self-defeating behaviors and attitudes. Locus of control, therefore, may not be consistently successful in the relating of specific diagnoses, but rather specific elements of the emotional disturbance. Regardless of diagnosis, children may display such self-defeating attitudes and behaviors. However, some diagnoses may have a higher percentage of cases displaying self-defeating behaviors, thus showing a significant relationship with an external locus of control.

This has implications for future research on the locus of control dimension. It does not seem possible that this construct will be useful in discriminating between specific diagnostic categories. However, as it may pinpoint the existence of these behavior and thought patterns, it may be useful in this context. Omizo, et al. (1984) discuss the utility of a group counseling approach, which seeks to alter these self-defeating patterns of behavior. Their findings suggest that such behavior patterns can be altered through group counseling which specifically attempts to engender a feeling of personal control over their

behavioral patterns. Locus of control scores lowered (i.e., reflected a shift towards internal locus of control) subsequent to their experimental intervention. Thus, locus of control scores were highly correlated in the identification of the problem group, and in the tracking of the effectiveness of therapy.

The future of locus of control research appears to be in the examination of emotional disturbance not between diagnoses, but rather within specific diagnoses. What seems to be identified with locus of control measures is the existence of thought and behavior patterns which hamper the success of the child. Ultimately, the more important issue is not the labeling of the child, but rather the alleviation of the child's symptoms. If the identification of these behavior and thought patterns can be made through the use of locus of control measures, then important issues in the therapeutic process can be targeted.



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