THE EFFECTS OF RELAXATION TRAINING AND PARENTAL INVOLVEMENT ON THE BEHAVIOUR OF LEARNING DISABLED CHILDREN

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Running Head: THE EFFECTS OF RELAXATION TRAINING

Abstract

The purpose of this study was to determine whether parental involvement increased the effectiveness of muscle relaxation activities used to reduce problem behaviour in learning disabled children. 12 learning disabled children were assigned to one of three groups: a relaxation training only group, a relaxation training with parental involvement and a control group. Both treatment groups participated in three 30 minute sessions per week for five weeks. All three groups were assessed before and after the treatment period using the Child Behaviour Checklist. Statistical calculations showed that neither group performed better than the control group. The reasons for the lack of significant results will be discussed along with ideas for future research.

The Effects of Relaxation Training and Parental Involvement on the Behaviours of Learning Disabled Children

Introduction

Prior research has suggested that relaxation training, either in a classroom setting or with parental involvement can have a significant effect on reducing behaviour problems in learning disabled children. (Moltane,1987; Amerikaner, Summerlin, 1982; Zieffle, Romney, 1985) The primary objective of this study is to find out whether the extra effort of enlisting parental involvement can significantly increase the effectiveness of the relaxation activities.

"Learning disability," as defined by the Ontario school system, is "a learning disorder evident in both academic and social situations that involves one or more of the processes necessary for the proper use of spoken language or the symbols of communication, and that is characterized by a condition that is not primarily the result of:(1) impairment of vision; (2) impairment of hearing; (3) physical handicap; (4) mental retardation; (5) primary emotional disturbance;

or (6) cultural difference. Learning disabilities result in a significant discrepancy between academic achievement and assessed intellectual ability, with defects in one or more of the following: (1) receptive language (i.e., listening, reading); (2) language processing (i.e., thinking, conceptualizing, integrating); (3) expressive language (i.e., talking, spelling, writing); and (4) mathematical computations. Learning disabilities may also be associated with one or more conditions diagnosed as: (1) a perceptual handicap; (2) a brain injury; (3) minimal brain dysfunction; (4) dyslexia; or (5) developmental aphasia." (Ontario Ministry of Education, 1984)

Relaxation training involves training a person to reduce physiological arousal or tension, thereby producing relaxing and calm responses. Learning to relax involves becoming aware of the difference between muscle tension and relaxation. Many people are not conscious of holding muscles tight and tense, so the training involves various methods for assessing degrees of muscle tension and relaxation. By learning to recognize tension and substitute a relaxation response children can discover their own ways of coping with

stress. This intervention has been used to improve behaviour associated with academic success among learning disabled children. (Moltane, 1987; Lupin, Braud, Braud & Duer, 1976; Amerikaner, Summerlin, 1982; Zieffle, Romney, 1985)

The effectiveness of this technique can be understood in light of the following considerations: Attending school regularly with consistently poor performance is a source of considerable stress for learning disabled children. Academic problems tend to become progressively more severe, and often are accompanied by aggressive behaviour patterns after repeated frustrations in school work. Increases in anxiety and muscular tension levels are frequently a result of the child's perception of his poor academic functioning. He is required often to work consistently under stress which, all too often, results in decreasing coping abilities and maladaptive learning behaviour such as impulsivity, heightened activity, limited span of attention and other reactions to frustration. Research with hyperactive children is particularly relevant to learning disabled students because many of the cognitive style characteristics

overlap but, this does not mean that all learning disabled children are hyperactive or that all hyperactive children are learning disabled. Relaxation exercises designed especially for children can help them to become aware of the feelings of body tension and can provide skills to reduce it. Children can be taught how to reduce their muscle tension and this seems to reduce anxiety as well. (Koeppen, 1974) While the number of studies using the relaxation techniques for the remediation of learning disabilities has been minimal, some do indicate positive results. (Carter & Synolds, 1974; Lupin, Braud, Braud & Duer, 1976; Culbertson & Wille, 1978; Amerikaner & Summerlin, 1982; Loffredo, Omizo & Hammett, 1984; Zieffle & Romney, 1985; Brandon, Eason, & Smith, 1986; Moltane, 1987).

Carter & Synolds (1974) looked at the effects of relaxation training upon handwriting quality. The procedure consisted of the lights being dimmed, the children closing their eyes and listening to a tape which consisted of seven minutes of instructions on how to relax. When the playback was finished, the lights were turned up and the children were asked to copy a

short paragraph from the chalk board. The program of relaxation training resulted in increased efficiency in handwriting. There was transfer of the effects to other class periods under non-experimental conditions. The improved handwriting remained stable over time.

Lupin, Braud, Braud & Duer (1976) suggested that hyperactive children are not only overactive but may be overly tense. The authors used a series of exercises to teach children deep muscle relaxation. Pre and post treatment ratings on a behavioral rating scale were completed by parents. A pre- and post-treatment battery of tests from the WISC-R were also administered. The results indicated that hyperactive children can show behaviourial improvements by practising relaxation exercises and by relaxing during visual imagery tapes. Parents reported that the children appeared happier and that there was improvement in their interpersonal relations. The children were also able to generalize behavioral improvement from the home to the classroom.

Culbertson & Wille (1978) sought to evaluate the effectiveness of a relatively short term program of relaxation training in producing changes in behaviours of elementary school students in terms of attention

related skills associated with reading tasks in the classroom. The results indicated that all three subjects receiving training demonstrated decreases in off task behaviour (out of seat behaviour, talking out loud and other behaviours incompatible with teacher directions) when pre and post relaxation training periods were compared. All of the subjects receiving relaxation training reported that they enjoyed the practise and would continue it.

Amerikaner and Summerlin (1982) sought to examine the effects of relaxation and social skills group participation on the behaviour and self-perceptions of learning disabled children. For one group, experimenters used relaxation training methods to help children learn alternatives to their usual patterns of inappropriate behaviour. A second group of children attended a social skills group designed to improve their confidence in social situations. The third group was merely identified and followed the regular classroom routine. The relaxation sessions made use of a set of pre-recorded commercially available relaxation tapes called "Peace, Harmony & Awareness" designed for use with children in schools. This study used a post

test only design and data was collected from all subjects and teachers two weeks after completion of the groups. The results from this study indicate that the relaxation group had significantly lower "acting out" scores than either the control group or the social skills group.

Loffredo, Omizo & Hammett (1984) investigated the effects of group relaxation exercises and parental involvement on the self concepts of hyperactive boys. They investigated whether relaxation exercises and parental support would increase positive feelings and self concepts in hyperactive boys. The results indicated significant differences between experimental and control groups. As a result of the treatment the experimental subjects gained a more positive perception of themselves in social relationships and their abilities to succeed in school. Relaxation therapy with parental involvement appears promising as a method of helping the hyperactive child.

Zieffle & Romney (1985) randomly assigned learning disabled children to one of three groups. The groups were a self instruction group, a progressive muscle relaxation group and a no treatment group. The purpose

of the self instruction group was to train subjects to clarify task requirements and impose verbal control over their performance on tasks. The aim of the relaxation training group was to provide the subjects with a means of relaxing when they felt tense or anxious and less able to concentrate on the task at hand. The results showed that the children who were given treatment performed significantly better than those who were not but neither treatment method was superior to the other.

Brandon, Eason & Smith (1986) wanted to determine if learning disabled males with hyperactive behaviours could be taught to relax, and if the effects of relaxation training on an attention-demanding motor task could be measured. Behaviourial Relaxation Training (BRT) was the training procedure utilized. BRT consists of directly training individuals in ten postures found to be maximally relaxing based upon EMG analysis. The Behavioral Relaxation Scale (BRS) was used to monitor relaxation levels during each measurement period. The results showed that there was a dramatic reduction in the number of unrelaxed behaviours (BRS scores) for all subjects across

training. The subjects maintained these reductions at the post-test and at a one month follow up. The results indicate that behavioral relaxation training is effective in increasing relaxed behaviour. The children were also able to perform an attention demanding motor task for a relatively long period without attention deficits.

Moltane's study (1988) was conducted to determine whether group counselling with relaxation training would reduce impulsivity, improve attention, achievement and self concept. Again, the "Peace, Harmony, Awareness" program was used with the experimental group. The experimental subjects showed a reduction in inappropriate behaviours and impulsivity as compared to subjects who were in the attention and control groups. The relaxation treatment was also found to be effective in increasing the attention/short-term memory skills of the experimental subjects as compared to the attention and control groups. This increase was measured by using the Digit Span sub-test of the WISC-R, a measure of attention and short-term memory.

The results of all these investigations are consistent, indicating significant muscle relaxation

effects in the behavioral and cognitive domains and providing some evidence that the emotional and academic domains are also affected positively. Relaxation appears to help children have more efficient access to previously learned material as well as displaying less impulsive and more attentive behaviour. The results of all these investigations also have some inconsistencies, gaps and unanswered questions. Very little attention has been paid to whether relaxation training produces a skill which can be maintained across time and generalized across all situations. Many of these studies did not do follow up studies so we really do not know whether these positive effects continued after the treatment stopped. A study needs to be completed to determine what practical limitations there are in relaxation training.

A variable of particular interest is parental involvement. Some studies (Lupin,Braud,Braud & Duer, 1976; Loffredo, Omizo & Hammett, 1984) involved the parents in the training and others (Moltane, 1987; Amerikaner & Summerlin, 1982) did not. Since enlisting the aid of parents normally requires additional investment of time by a teacher, and may preclude the

participation of some children, it would be useful to know whether such involvement contributes significantly to the effectiveness of training. However, previous studies have not directly assessed the effect of this variable. The present research addresses this issue. The independent variable was parental involvement and the dependent variable was a behaviour scale.

Methodology

Subjects

The subjects were 12 learning disabled children from the learning disability classes at Francis H. Clergue public elementary school in Sault Ste. Marie, Ontario. The ages of the children ranged from eight to thirteen years old and there were 10 boys and 2 girls. The children were assigned to one of three groups: relaxation training only, relaxation training with parental involvement or a control group whose participation was limited to the pre and post testing only. Random assignment was not used because not all parents were willing to participate and not all the children stayed at school for lunch.

Materials

The Child Behaviour Checklist (Achenbach, 1980) was the scale being used during the pre and post testing. This scale is designed to assess in a standardized format the behavioral problems and social competencies of children ages 4 to 16 years as reported by parents. It consists of 118 items related to behaviour problems which are scored on a 3 point scale ranging from "not true" to "often true" of the child. In addition to the CBCL completed by parents, supplementary data forms were also obtained from teachers. The Teacher's Report Form recorded the teacher's assessment of many of the same problems that the parents note, but some are added that rate children's academic performance.(Appendixes A & B)

The "Peace, Harmony, Awareness" tapes (Lupin, 1977) were used for my relaxation training. Through the use of guided fantasy stories, (to the mountains, beach, woods,a star) relaxation techniques, affirmations, music and visualization children learned how to relax and deal more effectively with stressful situations and develop more appropriate behaviours and social skills. These stories emphasized such concepts as: 1) developing of self confidence and belief in

one's self; 2) learning how to express feelings appropriately; 3) developing patience with one's self; 4) learning how to deal with criticism and; 5) developing awareness of inner wisdom.

Procedure

The subjects were from three different learning disabled classes at the public elementary school Francis H. Clergue. Parental consent was obtained from all the parents of the children who participated in this study and parental co-operation was also obtained from the parents of the children who were in the relaxation/parental involvement group. (See appendix C for consent letter used.)

All the children were pre-tested using the Child Behaviour Checklist and then were assigned to a relaxation group, a relaxation/parental involvement group, or a control group. The post testing was done at the end of the experiment using the same scale. Both the pre-testing and the post-testing were done by the parents and teachers in order that a comparison could be made between effects on behaviour at home and at school.

The relaxation training sessions consisted of three 1/2 hour sessions per week for five weeks. The relaxation training consisted of the Peace, Harmony, Awareness (Lupin, 1977), tapes described previously. The relaxation training only group sessions were conducted by the experimenter and took place at Francis H. Clergue elementary school during part of the lunch hour. Use of the library was obtained and set up in such a way that there was ample space for the children to be comfortable and to concentrate on the task at hand. Each session ended with a discussion about concepts within the tapes that were used. The children were encouraged to practise their skills in the classroom and at home whenever they felt tension and stress.

The relaxation training/parental involvement group's treatment was the same length and consisted of the same tapes but it took place at home with the parent's help and supervision. There was an initial conversation for the parents in which they were instructed on how to use the relaxation tapes with their children at home. Parents were told to find an area where the child and the parent could be

comfortable and concentrate on what they are doing; they were also told to encourage their children to practise their skills during stressful situations at home and at school.

During the five weeks of the experiment the parents were asked to keep a journal in order to ensure that they were using the tapes with their children. The parents were also contacted two weeks into the study to see how things were going. The control group carried on with their regular classroom activities and received no extra attention from the experimenter, parent or teacher.

Results

A repeated measures analysis of variance showed that there was no significant differences between the three group's results on the Child Behaviour Checklist. These results allowed me to make comparisons between the teacher's and parent's ratings before and after the treatment.

The parents ratings on the CBCL showed that from pre-test to post-test none of the groups performed any better. The teacher's ratings on the CBCL also showed that none of the three groups had any improvement from

pre-test to post-test.(See appendixes D & E for the summary table of the results found.) These results did not support my hypothesis stating that the relaxation/parental involvement group would perform significantly better than the other two groups.

Figure 1 shows the means of the parent's ratings on the CBCL for the pre and post testing of each group. These means showed that there was a slight improvement for the relaxation/parental involvement group compared to the relaxation only group but as stated previously nothing proved to be statistically significant.

Insert Figure 1 Here

Figure 2 shows the means of the teacher's ratings on the CBCL for the pre and post testing of each group. These means show that there wasn't any improvement from pre-test to post-test for either of the treatment groups.

Insert Figure 2 Here

Discussion

There a few reasons why this experiment didn't provide significant results for the use of relaxation training with parental involvement. The small subject population and the varied ages could account for the lack of significant results. There were only 4 children per group so this really wasn't a good sample of the population. Only one age group should be chosen for this training because with varied age groups you really can't tell which ages benefitted and which didn't . The older children, age 12 and up didn't enjoy the training session because they found the tapes to be too immature for them. The tapes appear to be more beneficial for younger children.

Other reasons for the lack of statistical support for this research are the time period used, the behaviour scale and the lack of parental co-operation. This study was only for a 5 week period. This might not have been a long enough time to get the necessary changes in behaviour that were being looked for. Another time problem with this study is that the

relaxation training-only group worked with the experimenter during part of the lunch hour. The children didn't really want to give up their free time to participate in this training so I didn't get their full co-operation during the sessions. In the future the training sessions should be held during class time. The children may be more willing to participate if it is made part of their curriculum.

The Child Behaviour Checklist was not an appropriate measure to use because it had such a wide array of behaviours that it tended to be a little too general. The behaviours it measured really didn't apply to what I was looking for. A scale needs to be found that is geared toward the specific behaviours of learning disabled children. Finally the lack of co-operation by parents who committed themselves and their children to participate and then didn't complete the training or complete the checklists accounts for the drop-out rate of 4 children and the lack of significant results.

This training could still be beneficial to learning disabled children if the problems mentioned can be controlled for. Relaxation training could become

an important part of a child's school and home environment with further research done.

Further research still needs to be done on the long term effects of relaxation training. Is this a type of intervention that needs to be ongoing to be effective or is one or two months of it efficient enough to last the individual? Another research idea is to see what kind of results you would find by using learning disabled children who are integrated into regular classes. These results were from children who are in special education classes and they are already in a small group setting so that may already be beneficial to them. Other future research questions are: Is there any age limitation on the training? Which is more effective: group or individual relaxation training? There is still a great importance in instructing parents in the use of relaxation training but it is difficult finding parents willing to make the necessary time commitment. What can be done about this?

I hope that even though these results were not statistically significant relaxation training may still become a part of the schooling and home environment for learning disabled children. I would also hope that it

would be something that parents and children would enjoy doing together and find beneficial for them both.

References

Achenbach, T.M, & Edelbrock, C., The Child Behaviour Checklist. University of Vermont, Burlington.

The Child Behaviour Checklist is designed to assess in standardized format the behaviourial problems and social competencies of children ages 4 to 16 years as reported by parents.

Amerikaner, M., and Summerlin, M.L., Group counselling with learning disabled children: Effects of social skills and relaxation training on self concept and classroom behaviour. Journal of Learning Disabilities, 17, (6) 340-343.

This study examined the effects of two group counselling approaches -- social skills and relaxation training on learning disabled children's self-concept and on their teacher's behaviour as assessed by their teachers.

Brandon, J.E., Eason, R.L., & Smith, T.L., (1986) Behavioral relaxation training and motor performance of learning disabled children with hyperactive behaviours. Adapted Physical Activity Quarterly, 3, 67-79.

The purposes of this study were to determine if learning disabled males referred with hyperactive behaviours could be taught to relax, and to measure the effects of relaxation training on an attention demanding motor task.

Carter, J.L., & Synolds, D., (1974) Effects of relaxation training upon handwriting quality. Journal of Learning Disabilities, 7, (4), 53-55.

An audio taped relaxation program was devised and presented to 32 boys who were in special classes for minimally brain injured children.

Culbertson, F.M., & Wille, C., (1978) Relaxation training as a reading remediation tool for school aged children. Canadian Counsellor, 12, 266-269.

This study sought to evaluate the effectiveness of a relatively short term program of relaxation training in elementary students in terms of attention related skills associated with reading tasks in the classroom.

Koeppen, Arlene,S., (19740 Relaxation training for children. Elementary School Guidance and Counselling, 9, 14-21.

This article addresses the lack of relaxation training models for children. It goes on to suggest that a

Learning disabled children were assigned at random to one of three groups: a self-instruction group, a progressive muscle relaxation group or a no treatment group and were assessed before and after the treatment period on cognitive tasks requiring deliberation and concentration.

Appendix A

Child Behaviour Checklist: Parents Report Form

this 2 if the item is very true or often true of your [illegible] somewhat or sometimes true of your child. If the item is not true of your child, circle the 0. Please answer all items as well as you can, even if some do not seem to apply to your child.

0 = Not True (as far as you know) **1 = Somewhat or Sometimes True** **2 = Very True or Often True**

(0)	1	2	1.	Acts too young for his/her age
(0)	1	2	2.	Allergy (describe): _____
0	1	(2)	3.	Argues a lot
0	(1)	2	4.	Asthma
(0)	1	2	5.	Behaves like opposite sex
(0)	1	2	6.	Bowel movements outside toilet
(0)	1	2	7.	Bragging, boasting
0	1	(2)	8.	Can't concentrate, can't pay attention for long
0	(1)	2	9.	Can't get his/her mind off certain thoughts; obsessions (describe): _____
(0)	1	2	10.	Can't sit still, restless, or hyperactive
(0)	1	2	11.	Clings to adults or too dependent
(0)	1	2	12.	Complains of loneliness
(0)	1	2	13.	Confused or seems to be in a fog
(0)	1	2	14.	Cries a lot
0	1	2	15.	Cruel to animals
0	1	(2)	16.	Cruelty, bullying, or meanness to others
(0)	1	2	17.	Day-dreams or gets lost in his/her thoughts
(0)	1	2	18.	Deliberately harms self or attempts suicide
0	(1)	2	19.	Demands a lot of attention
(0)	1	2	20.	Destroys his/her own things
(0)	1	2	21.	Destroys things belonging to his/her family or other children
0	(1)	2	22.	Disobedient at home
0	(1)	2	23.	Disobedient at school
(0)	1	2	24.	Doesn't eat well
(0)	1	2	25.	Doesn't get along with other children
(0)	1	2	26.	Doesn't seem to feel guilty after misbehaving
(0)	1	2	27.	Easily jealous
(0)	1	2	28.	Eats or drinks things that are not food (describe): _____
(0)	1	2	29.	Fears certain animals, situations, or places, other than school (describe): _____
(0)	1	2	30.	Fears going to school
(0)	1	2	31.	Fears he/she might think or do something bad
0	(1)	2	32.	Feels he/she has to be perfect
0	(1)	2	33.	Feels or complains that no one loves him/her
(0)	1	2	34.	Feels others are out to get him/her
0	(1)	2	35.	Feels worthless or inferior
(0)	1	2	36.	Gets hurt a lot, accident-prone
0	(1)	2	37.	Gets in many fights
(0)	1	2	38.	Gets teased a lot
0	(1)	2	39.	Hangs around with children who get in trouble
(0)	1	2	40.	Hears things that aren't there (describe): _____
0	(1)	2	41.	Impulsive or acts without thinking
(0)	1	2	42.	Likes to be alone
0	(1)	2	43.	Lying or cheating
(0)	1	2	44.	Bites fingernails
(0)	1	2	45.	Nervous, highstrung, or tense
(0)	1	2	46.	Nervous movements or twitching (describe): _____
(0)	1	2	47.	Nightmares
(0)	1	2	48.	Not liked by other children
(0)	1	2	49.	Constipated, doesn't move bowels
(0)	1	2	50.	Too fearful or anxious
(0)	1	2	51.	Feels dizzy
(0)	1	2	52.	Feels too guilty
(0)	1	2	53.	Overeating
0	(1)	2	54.	Overtired
(0)	1	2	55.	Overweight
			56.	Physical problems without known medical cause:
(0)	1	2		a. Aches or pains
(0)	1	2		b. Headaches
(0)	1	2		c. Nausea, feels sick
(0)	1	2		d. Problems with eyes (describe): _____
(0)	1	2		e. Rashes or other skin problems
(0)	1	2		f. Stomachaches or cramps
(0)	1	2		g. Vomiting, throwing up
(0)	1	2		h. Other (describe): _____

0 1 2 57. Physically attacks people
0 1 2 58. Picks nose, skin, or other parts of body (describe): _____
_____ 80
0 1 2 59. Plays with own sex parts in public 16
0 1 2 60. Plays with own sex parts too much
0 1 2 61. Poor school work
0 1 2 62. Poorly coordinated or clumsy
0 1 2 63. Prefers playing with older children 20
0 1 2 64. Prefers playing with younger children
0 1 2 65. Refuses to talk
0 1 2 66. Repeats certain acts over and over; compulsions (describe): _____
_____
0 1 2 67. Runs away from home
0 1 2 68. Screams a lot 25
0 1 2 69. Secretive, keeps things to self
0 1 2 70. Sees things that aren't there (describe):
_____
_____
0 1 2 71. Self-conscious or easily embarrassed
0 1 2 72. Sets fires
0 1 2 73. Sexual problems (describe):
_____
_____ 30
0 1 2 74. Showing off or clowning
0 1 2 75. Shy or timid
0 1 2 76. Sleeps less than most children
0 1 2 77. Sleeps more than most children during day and/or night (describe): _____
_____
0 1 2 78. Smears or plays with bowel movements 35
0 1 2 79. Speech problem (describe): _____
_____
0 1 2 80. Stares blankly
0 1 2 81. Steals at home
0 1 2 82. Steals outside the home
0 1 2 83. Stores up things he/she doesn't need (describe):

0 1 2 84. Strange behavior (describe): _____
_____
0 1 2 85. Strange ideas (describe):
_____
0 1 2 86. Stubborn, sullen, or irritable
0 1 2 87. Sudden changes in mood or feelings
0 1 2 88. Sulks a lot 45
0 1 2 89. Suspicious
0 1 2 90. Swearing or obscene language
0 1 2 91. Talks about killing self
0 1 2 92. Talks or walks in sleep (describe):
_____
0 1 2 93. Talks too much 50
0 1 2 94. Teases a lot
0 1 2 95. Temper tantrums or hot temper
0 1 2 96. Thinks about sex too much
0 1 2 97. Threatens people
0 1 2 98. Thumb-sucking 55
0 1 2 99. Too concerned with neatness or cleanliness
0 1 2 100. Trouble sleeping (describe):
_____
0 1 2 101. Truancy, skips school
0 1 2 102. Underactive, slow moving, or lacks energy
0 1 2 103. Unhappy, sad, or depressed 60
0 1 2 104. Unusually loud
0 1 2 105. Uses alcohol or drugs (describe):
_____
0 1 2 106. Vandalism
0 1 2 107. Wets self during the day
0 1 2 108. Wets the bed 65
0 1 2 109. Whining
0 1 2 110. Wishes to be of opposite sex
0 1 2 111. Withdrawn, doesn't get involved with others
0 1 2 112. Worrying
113. Please write in any problems your child has that were not listed above:
0 1 2 _____ 70
0 1 2 _____

Appendix B

Child Behaviour Checklist - Teachers Report Form

If the item is very true or often true of the pupil. Circle the 1 if the item is somewhat or sometimes true of the pupil. If the item is not true of the pupil, circle the 0. Please answer all items as well as you can, even if some do not seem to apply to this pupil.

0 = Not True (as far as you know) 1 = Somewhat or Sometimes True 2 = Very True or Often True

0 1 2 1. Acts too young for his/her age
0 1 2 2. Hums or makes other odd noises in class
0 1 2 3. Argues a lot
0 1 2 4. Fails to finish things he/she starts
0 1 2 5. Behaves like opposite sex
0 1 2 6. Defiant, talks back to staff
0 1 2 7. Bragging, boasting
0 1 2 8. Can't concentrate, can't pay attention for long
0 1 2 9. Can't get his/her mind off certain thoughts; obsessions (describe)_____
_____
0 1 2 10. Can't sit still, restless, or hyperactive
0 1 2 11. Clings to adults or too dependent
0 1 2 12. Complains of loneliness
0 1 2 13. Confused or seems to be in a fog
0 1 2 14. Cries a lot
0 1 2 15. Fidgets
0 1 2 16. Cruelty, bullying, or meanness to others
0 1 2 17. Daydreams or gets lost in his/her thoughts
0 1 2 18. Deliberately harms self or attempts suicide
0 1 2 19. Demands a lot of attention
0 1 2 20. Destroys his/her own things
0 1 2 21. Destroys property belonging to others
0 1 2 22. Difficulty following directions
0 1 2 23. Disobedient at school
0 1 2 24. Disturbs other pupils
0 1 2 25. Doesn't get along with other pupils
0 1 2 26. Doesn't seem to feel guilty after misbehaving
0 1 2 27. Easily jealous
0 1 2 28. Eats or drinks things that are not food (describe): _____
_____
0 1 2 29. Fears certain animals, situations, or places other than school (describe) _____

0 1 2 31. Fears he/she might think or do something bad
0 1 2 32. Feels he/she has to be perfect
0 1 2 33. Feels or complains that no one loves him/her
0 1 2 34. Feels others are out to get him/her
0 1 2 35. Feels worthless or inferior
0 1 2 36. Gets hurt a lot, accident-prone
0 1 2 37. Gets in many fights
0 1 2 38. Gets teased a lot
0 1 2 39. Hangs around with others who get in trouble
0 1 2 40. Hears things that aren't there (describe):
_____
0 1 2 41. Impulsive or acts without thinking
0 1 2 42. Likes to be alone
0 1 2 43. Lying or cheating
0 1 2 44. Bites fingernails
0 1 2 45. Nervous, high-strung, or tense
0 1 2 46. Nervous movements or twitching (describe):
_____
0 1 2 47. Overconforms to rules
0 1 2 48. Not liked by other pupils
0 1 2 49. Has difficulty learning
0 1 2 50. Too fearful or anxious
0 1 2 51. Feels dizzy
0 1 2 52. Feels too guilty
0 1 2 53. Talks out of turn
0 1 2 54. Overtired
0 1 2 55. Overweight
56. Physical problems without known medical cause:
0 1 2 a. Aches or pains
0 1 2 b. Headaches
0 1 2 c. Nausea, feels sick
0 1 2 d. Problems with eyes (describe): _____
_____
0 1 2 e. Rashes or other skin problems
0 1 2 f. Stomachaches or cramps
0 1 2 g. Vomiting, throwing up
0 1 2 h. Other (describe): _____

0 1 2 57. Physically attacks people

0 1 2 58. Picks nose, skin, or other parts of body (describe) _____

_____

0 1 2 59. Sleeps in class

0 1 2 60. Apathetic or unmotivated

0 1 2 61. Poor school work

0 1 2 62. Poorly coordinated or clumsy

0 1 2 63. Prefers being with older children

0 1 2 64. Prefers being with younger children

0 1 2 65. Refuses to talk

0 1 2 66. Repeats certain acts over and over; compulsions (describe): _____

_____

0 1 2 67. Disrupts class discipline

0 1 2 68. Screams a lot

0 1 2 69. Secretive, keeps things to self

0 1 2 70. Sees things that aren't there (describe):

_____

_____

0 1 2 71. Self-conscious or easily embarrassed

0 1 2 72. Messy work

0 1 2 73. Behaves irresponsibly (describe): _____

_____

0 1 2 74. Showing off or clowning

0 1 2 75. Shy or timid

0 1 2 76. Explosive and unpredictable behavior

0 1 2 77. Demands must be met immediately, easily frustrated

0 1 2 78. Inattentive, easily distracted

0 1 2 79. Speech problem (describe): _____

_____

0 1 2 80. Stares blankly

0 1 2 81. Feels hurt when criticized

0 1 2 82. Steals

0 1 2 83. Stores up things he/she doesn't need (describe)

_____

_____

0 1 2 85. Strange ideas (describe): _____

_____

0 1 2 86. Stubborn, sullen, or irritable

0 1 2 87. Sudden changes in mood or feelings

0 1 2 88. Sulks a lot

0 1 2 89. Suspicious

0 1 2 90. Swearing or obscene language

0 1 2 91. Talks about killing self

0 1 2 92. Underachieving, not working up to potential

0 1 2 93. Talks too much

0 1 2 94. Teases a lot

0 1 2 95. Temper tantrums or hot temper

0 1 2 96. Seems preoccupied with sex

0 1 2 97. Threatens people

0 1 2 98. Tardy to school or class

0 1 2 99. Too concerned with neatness or cleanliness

0 1 2 100. Fails to carry out assigned tasks

0 1 2 101. Truancy or unexplained absence

0 1 2 102. Underactive, slow moving, or lacks energy

0 1 2 103. Unhappy, sad, or depressed

0 1 2 104. Unusually loud

0 1 2 105. Uses alcohol or drugs (describe): _____

_____

0 1 2 106. Overly anxious to please

0 1 2 107. Dislikes school

0 1 2 108. Is afraid of making mistakes

0 1 2 109. Whining

0 1 2 110. Unclean personal appearance

0 1 2 111. Withdrawn, doesn't get involved with others

0 1 2 112. Worrying

113. Please write in any problems the pupil has that were not listed above:

0 1 2 _____

0 1 2 _____

0 1 2 _____

Appendix C

Letter of Consent for Parents

Dear Parents,

My name is Lorena Plastino and I am a fourth year psychology student at Algoma University College. I am doing my thesis this year and I have received permission from the principal to use the learning disabled classes at Francis H. Clergue public school. Your child's teacher has also consented to co-operate.

My study is on the use of relaxation training with learning disabled children. This type of training has been used in previous research and has been proven to be beneficial to learning disabled children. The relaxation training will involve the use of pre-recorded tapes that have also been used in previous research and proven to be effective.

This training would probably start the third week in January and end the last week in February. All parents will be asked to fill out a questionnaire prior to the training and also after the training. Some parents will be randomly assigned to participate in this training at home with their children. The time committment in this case would be 1/2 an hour, 3 nights a week, for 6 weeks. There will be an initial meeting in January for those parents selected to participate.

Some children will be given the training at school by myself. It will be done during the noon hour on the same basis as the home training. Any parent who feels they cannot make this time committment please indicate this below. Also let me know if your child is allowed to participate in this training. If you have any questions or concerns about this training feel free to contact me at this number. (254-3840) More details will follow as necessary.

Please return the bottom portion of this note to your child's teacher by Tuesday January 22 1992.

_____ Yes I will allow my child to participate in this training.

_____ No I will not allow my child to participate in this training.

Parents signature:_____

_____ Yes I am willing to participate in this training if selected.

_____ No I am not willing to participate in this training.

Parents signature:_____

Address:_____

Phone number:_____

Appendix D

Summary Table of Parent's Ratings on the Child Behaviour Checklist

Source	df	SS	MF	F
Bet. subj.	11	7253		
Groups	2	727	363.5	0.50
S's w/in groups	9	6526	725.1	
Within subj.	12	718		
Test	1	12	12	
T x G	2	16	8	0.16
T x S's w/in groups	9	690	76.7	0.10
Total	23	7971		

Appendix E

Summary Table of Teacher's Ratings on the Child Behaviour Checklist

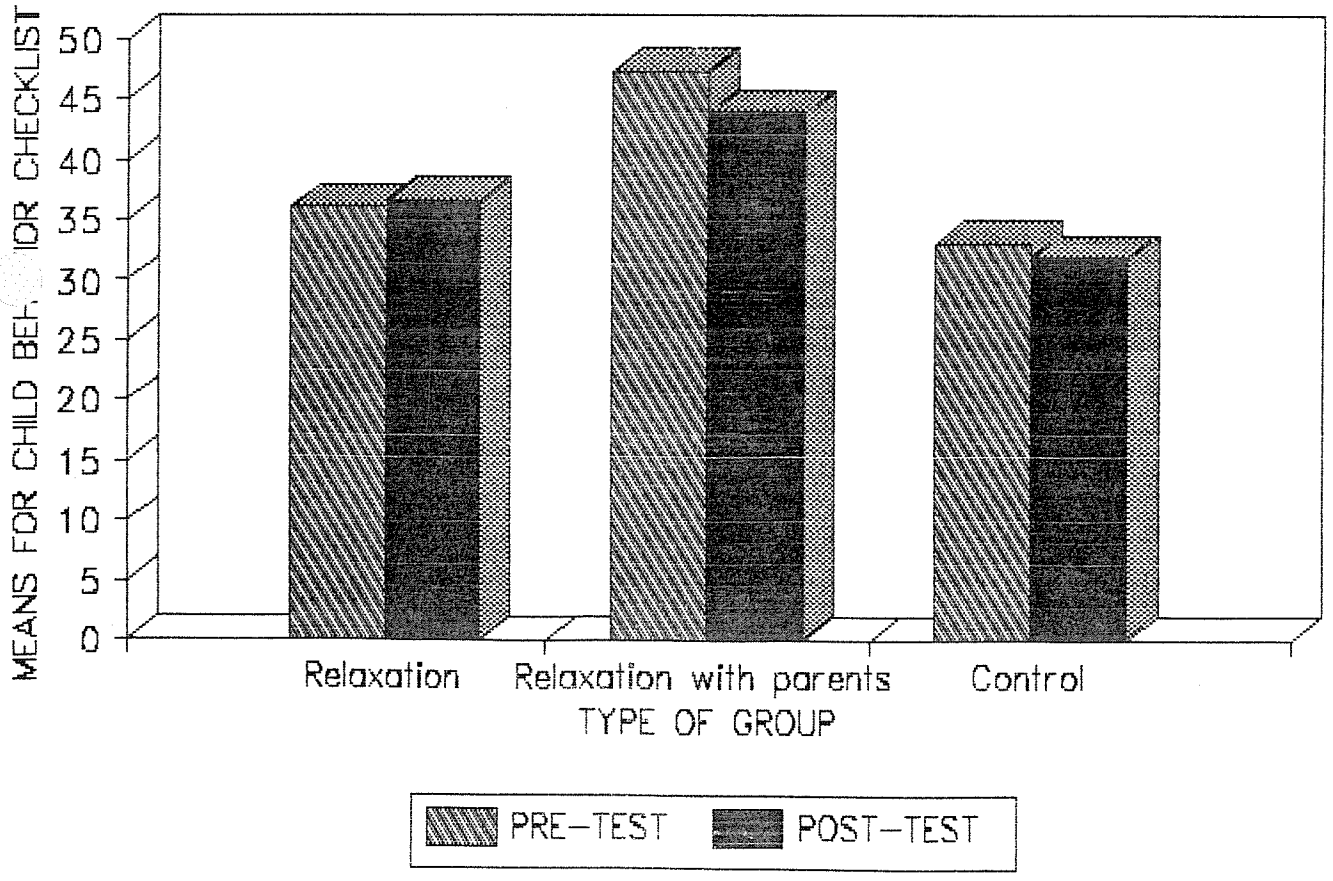
Source	df	SS	MS	F
Bet subj.	11	19335.5		
Groups	2	1232.4	616.2	.31
S's w/in groups	9	18103.1	2011.5	
Within subj.	12	950.5		
Test	1	7.08	7.08	
T x G	2	186.27	93.14	.08
T x S's w/in groups	9	757.15	84.13	1.11
Total	23	20286		

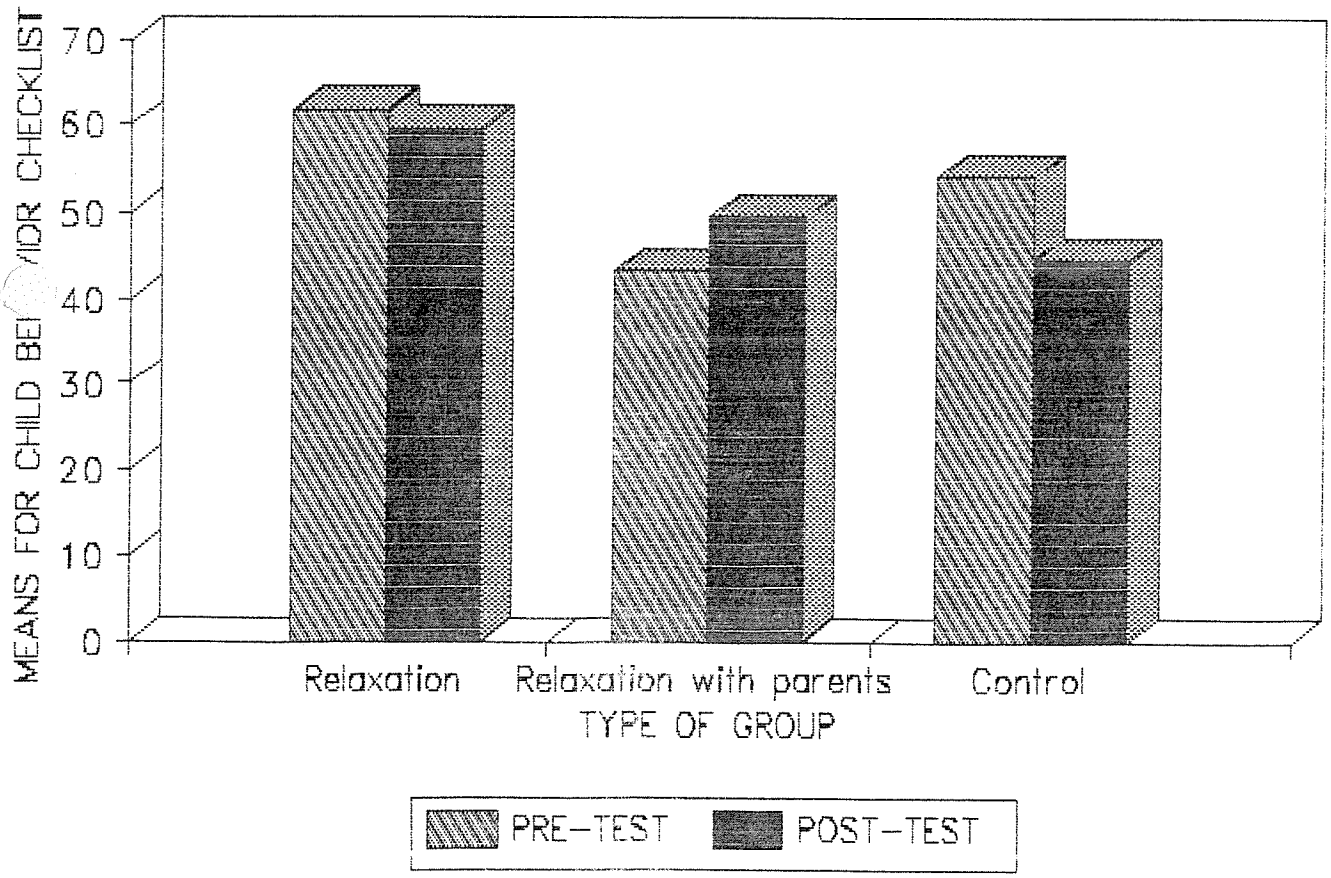
Figure Caption

Figure 1. Means of the parent's ratings on the Child Behaviour Checklist for the pre and post testing.

Figure Caption

Figure 2. Means of the teachers ratings on the Child Behaviour Checklist for the pre and post testing.


MEANS FOR CHILD BEHAVIOR CHECKLIST
50
45
40
35
30
25
20
15
10
5
0
Relaxation
Relaxation with parents
Control
TYPE OF GROUP
PRE-TEST
POST-TEST


MEANS FOR CHILD BEHAVIOR CHECKLIST
70
60
50
40
30
20
10
0
Relaxation
Relaxation with parents
Control
TYPE OF GROUP
PRE-TEST
POST-TEST