The use of single-session cinematherapy and aggressive behavioral tendencies among adopted children—A pilot study

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Abstract

This paper describes the effectiveness of cinematherapy based on cognitive-behavioral theory among a group of 14 adopted children with special needs who attended the Overnight Respite and Recreation Program. After baseline data were collected, the participants were assigned to an experimental group or a control group. The control group viewed a videotape without receiving systematic processing before, during, or after watching the video. For the experimental group, structured and guided processing was provided, including briefing and debriefing. In the results, there was a statistically significant mean difference between the two groups on impulsivity/impatience, a subscale of the Aggression Inventory (AI), indicating that a session that incorporated cognitive-behavioral theory helped the participants in the experimental group decrease their tendency to be impulsive and impatient. In addition, one statistically significant mean difference was found between the pre-test and post-test within the control group on a subscale entitled "physical aggression," indicating that the level of the behavioral tendency toward physical aggression within the control group significantly increased after the movie night.

Key words: cognitive-behavioral theory, cinematherapy, adopted children, aggression

Introduction

It is estimated that each year nearly 20,000 children with special needs are adopted by new families.[1] These children account for 20 to 30 percent of all domestic adoptions. The category of "special needs" includes those children who are relatively old, abused, and of a racial minority, and those who have medical problems and disabilities.[2] Most adopted children with special needs experienced various types of social and familial injustices such as abuse and neglect during their formative years. Some of them may have never experienced consistent caring or trusting human relationships.[3] In addition, the trauma associated with abuse, separation from the birth family, and participation in the child welfare system results in varying degrees of attachment difficulties and related emotional and behavioral problems.[4] Gil reported that adopted children with special needs, particularly those children who have been abused, showed numerous behavioral and emotional difficulties such as anxiety, anger, aggression, hostility, emotional disturbance, fear, depression, attachment problems, withdrawal, self-destructive behavior, and delinquency.[5]

Among these various difficulties, aggression has been identified as one of the manifested symptoms the population exhibits. For example, Deater-Deckard and Plomin found that adopted children showed higher aggression level than nonadopted children.[6] Finkelhor reported that children who were sexually abused regularly exhibited anger and hostility.[7] Gil also reported that anxiety, aggression, and hostility were primary behavioral problems of children who have been abused.[5]

This study attempted to examine the effectiveness of cinematherapy, a relatively new cognitive-behavioral therapy, in

reducing aggressive behavioral tendencies among adopted children. Because most studies examining the impact of cinematherapy have been anecdotal or qualitative in nature, this study used an experimental control group design to examine the effectiveness of a cognitive restructuring process after watching a film. More specifically, this study attempted to compare the effectiveness of two different types of film watching: structured versus nonstructured. The structured session, hereafter referred to as "cinematherapy," was purposefully designed to use a film or a movie to challenge and change the client's way of thinking and irrational belief system, thereby leading clients to changed behavioral patterns. The process includes preparation, briefing, implementation, debriefing, and follow-up.[8] In contrast, a nonstructured session, which does not contain the systematic processing, was used to compare the effectiveness of the structured cinematherapy.

Before presenting the study's specific hypothesis, this paper will define cinematherapy and provide an overview of its associated benefits using extant literature. Then, this paper will present a theoretical foundation of cognitive-behavioral therapy that explicates the therapeutic values of cinematherapy.

Cinematherapy

Cinematherapy is a therapeutic technique that involves careful selection and assignment of movies for clients to watch, with follow-up processing of their experiences during therapy sessions.[9] Therapists (e.g., counselors, psychologists) have been using movies as a form of therapy for years, and they report that movies have a powerful effect on people's lives.[9,10]

Although watching movies has been used as a form of entertainment and is a popular leisure-time activity for many people, the same activity has been used as a form of therapy that goes beyond entertainment or a diversionary activity. Considering the fact that watching movies has a powerful effect on people[10] and is an important part of their lives,[9] some therapists took advantage of using cinema's portrayal of laughing, crying, and even touching people's hearts to help people rediscover themselves and allow them open up to new possibilities.

Cinematherapy is an outgrowth of bibliotherapy,[11] which uses reading materials such as novels, plays, short stories, and booklets to help clients solve their problems. The role of the therapist is to help clients identify with the characters in the reading material and project themselves into the story. This process often results in an emotional reaction and cognitive restructuring.[12] The situations bibliotherapists explore are everyday life problems such as substance abuse, identity and self-concept, illnesses, disabilities, aging, and independence. In bibliotherapy, these types of problem-solving issues are best accomplished through small-group or whole-class readings and discussions of the topic.

In many ways, cinematherapy is used for the same reasons as bibliotherapy. The only difference is that cinematherapy uses a different therapeutic modality that involves films and movies, instead of using reading materials. That is, therapists provide opportunities for clients to watch a film or a movie and process their experiences during therapy sessions.[11] Now, an increasing number of psychotherapists and clinical psychologists use movies to help their clients in dealing with a variety of clinical problems.[10,11,13,14] Although it has been used routinely in various allied health and human service professions, cinematherapy is a relatively new intervention technique in therapeutic recreation settings.

There are some important benefits in using cinematherapy as a therapeutic tool. One advantage is that film provides an alternative means to create change in a nonthreatening manner, and affords clients the opportunity to safely assess alternative ideas and behaviors.[15] By using movies in therapeutic situations, the clients are able to connect emotionally, cognitively, and behaviorally with a character who demonstrates problems that are similar to their own. Cinematherapy not only provides clients an opportunity to recognize that they are not alone in facing certain problems, but also

helps them see that others have overcome the same difficulties, which ultimately helps them gain insights into solving their own problems.[9]

Hesley and Hesley[14] identified several practical benefits associated with using cinematherapy. First, it is inexpensive to administer; it costs only a few dollars to rent a video. Second, movies are easily accessible; they can be rented from or purchased from a nearby store, and there are countless selection options. Third, they can be used with a diverse clientele and many issues can be explored. Finally, clients are very likely to comply with this type of therapy, and it may easily enhance rapport between client and therapist.

Cognitive–behavioral theory

One important theoretical rationale behind cinematherapy is that it uses cognitive restructuring through processing, which may help clients change their behaviors. Thus, the cognitive-behavioral theory offers an important theoretical foundation that involves therapeutic processes associated with cinematherapy. According to Austin, cognitive-behavioral theory focuses on helping clients examine their maladaptive thinking processes and the effects of those processes on behaviors and emotions.[12] That is, cognitive-behavioral theory emphasizes internal events (i.e., thoughts and feelings) in conceptualizing the factors that precipitate and maintain their behaviors. Thus, the therapist who incorporates cognitive-behavioral theory assists clients in identifying thoughts and beliefs about themselves and the world, and helps clients examine the validity of these cognitions. Furthermore, if necessary, clients are encouraged and challenged to change the way they think about themselves and their environments. In other words, a therapist helps clients identify maladaptive ways of thinking and change the maladaptive cognitive process into positive and effective ways of thinking, thereby leading to adjusted behaviors in the future.

Research findings indicate that cognitive-behavioral therapy is helpful with children and adolescents who are depressed, anxious, or having problems coping with stress.[16] Other studies involving the use of cognitive-behavioral therapy suggest that it has been successful in various clinical settings with diverse client groups.[17-19]

In short, cognitive-behavioral theory stresses the notion that clients have the capacity to examine themselves and develop insights into themselves. Therefore, the main responsibility of the therapist is to assist the clients to identify irrational thoughts and to take steps to establish new and positive thought patterns. In the present study, cognitive-behavioral theory is to be incorporated into cinematherapy to reduce aggressive behavioral tendency among adopted children.

Hypothesis

Whereas an unstructured way of watching films or movies is intended primarily for entertainment or a diversional purpose, cinematherapy uses purposeful and systematic cognitive processing components that are designed to change clients' cognition and feelings. Thus, the following hypothesis was tested: Among two different types of film watching groups, the children who attend cinematherapy that incorporates cognitive processing will be more likely to report a decreased level of aggressive behavioral tendency than those who attend a movie night that does not use cognitive processing.

Methods

Participants

Participants in this study were 14 children (four boys, 10 girls) who took part in the Overnight Respite and Recreation Program on April 25 and 26, 2003. The majority of participants were African Americans (n = 9), followed by Caucasians (n = 3) and others (not specified, n = 2). No Hispanic or Asian participants attended the program. The ages of the participants ranged between seven and 14 years. Of the 14 participants, eight had attended the Respite and Recreation program more than five times during the past few years.

All of the participants in this study were adopted children and had experienced sexual abuse and/or other forms of physical and emotional abuse from their birth

families. Any children from adoptive families were eligible to participate in the program. Each program session was advertised through the Northeast Ohio Adoption Agency's newsletter, and parents registered for the program on behalf of their children. Therefore, there were no specific criteria for selection of the participants.

Instrumentation

The Aggression Inventory (AI)[20] was used to measure aggressive behavioral tendencies. This instrument has 30 items designed to measure different levels of aggression. Respondents rate the items on a five-point Likert scale, ranging from 1 ("Does not apply at all to me") to 5 ("Applies exactly to me"). The AI consists of four subscales: physical aggression (PA, four questions); verbal aggression (VA, seven questions); impulsivity/impatience (II, seven questions); and avoidance (Avoid, two questions).

The AI has fair to good internal consistency. For the male participants, the alpha coefficients were PA = 0.82; VA = 0.81; II = 0.80; and 0.65 for Avoid. The alpha coefficients for the female participants were PA = 0.70; VA = 0.76; II = 0.76; and 0.70 for Avoid. Data on stability were not reported. The validity of the AI subscale has been supported by factor analysis and differences between men and women. The latter suggests that the AI has fair-known group validity in which men and women significantly differed on each subscale and on all but six of the individual items.[20]

Although none has been reported about the use of AI with young people, the wording of each statement was easy for children and adolescents who are approximately the age of 10 years to understand. In this study, only one child (aged seven years) needed some help in clarifying the meaning of several items in AI.

Procedures

The first author solicited parent(s) of potential study participants (i.e., adopted children who participated in the Respite and Recreation Program) to obtain parental permission for their children to take part in the study. This procedure took place when the families arrived at a local camp for the Overnight Respite and Recreation Program on April 25, 2003.

The baseline data were collected after the children finished their dinner (6:00 PM) and before "the Movie Night" (8:00 PM). Therefore, no other particular programs were provided between their arrival and "the Movie Night." Children were given a brief verbal description about the survey. The real intent of the study, however, was not revealed to the participants by the researcher to prevent the children from providing socially desirable answers for the questions. The children were informed that their participation in this study was voluntary, and they were free to withdraw at any time without penalty.

The children were assigned to an experimental group or a control group. To increase the likelihood that the two groups of children in the experiment were equivalent, pairs of individuals were matched based on their initial scores on the AI instrument. That is, the researcher paired two children, whose scores on aggressive behavioral tendency were similar, and the members of each matched pair were then assigned to the experimental or control group at random (i.e., a mechanical matching design with random assignment). One of the 15 participants' (N = 15) responses was not recognizable, however, and it was excluded in the analysis. As a result, seven children were assigned to an experimental group, and another group of seven children was assigned to a control group.

All of the participants from both groups watched the movie together ("A Bug's Life," rated G) with their counselors. The film was selected because the theme of the film was relevant to the purpose of the study. Specifically, the aggressiveness (i.e., bullying behaviors) of the grasshoppers and the reactions of the ants were considered as a good story to initiate a cognitive-behavioral intervention.

Students (N = 19) at a Midwestern university served as volunteer counselors and were enrolled in the Leisure Studies program or the Family Studies and Youth Development program at the school. The first author recruited the student volunteers mainly through the advertisement of the

Table 1. Sequential steps of debriefing and sample questions

1. Reflection on the movie: How was the movie? What scene or part of the movie impressed you the most? How did you feel about the grasshoppers?
2. Identification of similarities (problems): What kinds of problems do the grasshoppers have? **Physical aggression:** Is it a good idea to physically fight with people when you have a problem? **Verbal aggression:** How about insulting, cursing, or putting down others? Impatience/impulsiveness: When you have a problem with others, do you try to have time to think how you will act or do you just react immediately? Which way is more desirable? **Avoidance issues:** Is avoiding a difficult situation the best way to solve the problem? Have you experienced any similar problems that the character had? Let them share their experience, it they are willing to share.
3. Discovery of new ways of problem-solving or coping skills: Can you tell us any good methods to solve a difficult situation? How would you deal with the grasshopper differently if you were an ant?
4. Transfer of their leaning to real life situations: Can you tell us what you have learned from the movie? How will you apply today's learning to your situation?

program in his classes. Of the 19 volunteers, 10 had previous experience with the program. All of the volunteers were required to attend a one-day long orientation to better understand the program and the clients. They did not receive any specific instructions related to this research study. The volunteer counselors were asked to monitor the children while watching the movie and to help the children complete the questionnaire only when necessary.

The physical setting in which the children watched the movie was a large hall in a cabin at a local camp. The first author briefly announced what movie would be shown, but no other information about the film was provided. A few rules for the movie night were addressed to prevent possible disturbances during the movie. For example, the children were advised to go to the bathroom before the movie began, and to not disturb other viewers by talking or standing. The volunteers were also advised to monitor the campers while watching the movie. The movie was projected by a digital projector connected to a notebook computer. Light was controlled and the movie soundtrack was amplified by the use of a set of speakers. All of the children concentrated on the movie, and no particular disruptive behaviors occurred during the viewing.

After watching the movie, the children in the experimental group were led to a small, quiet room to avoid possible distractions. For the experimental group (n = 7), a structured and guided debriefing process was provided by the first author. The debriefing process was conducted in a group situation, following the sequential steps suggested by Yang and Lee[8]: 1) reflection on the movie, 2) identification of the similarities, 3) discovery of new ways of problem-solving or coping skills, and 4) transfer of learning to real-life situations. Examples of questions for the debriefing session can be found in Table 1.

Group processing during the debriefing stage was recorded on audiotape to document probable cognitive changes on aggressive behavioral tendencies. After finishing the recommended cinematherapy process, the children

Table 2. A summary of between-group t-tests for the dependent measures

Variables	Mean and SD		t-test	
	Control group (n = 7)	Experimental group (n = 7)	t values	p
Verbal aggression (VA)				
Pretest	17.57 (7.02)	18.29 (5.82)	0.21	0.84
Post-test	18.86 (8.51)	16.86 (5.01)	-0.54	0.60
Physical aggression (PA)				
Pretest	7.00 (3.51)	10.14 (6.07)	1.19	0.26
Post-test	9.57 (5.22)	8.43 (5.06)	-0.42	0.69
Avoidance (Avoid)				
Pretest	5.86 (2.61)	4.86 (2.80)	-0.69	0.05
Post-test	5.57 (3.46)	3.86 (2.04)	-1.13	0.28
Impulsivity/impatience (II)				
Pretest	22.86 (6.47)	19.43 (5.80)	-1.04	0.32
Post-test	24.29 (17.21)	16.29 (5.12)	-2.80	0.02*
Aggregate aggression (AA)				
Pretest	53.29 (18.11)	53.71 (17.21)	-0.06	0.95
Post-test	58.29 (20.10)	46.0 (9.76)	-1.46	0.17

* Significant at 0.05 level (two-tailed).

were asked to fill out the assessment again. Volunteers were available for assistance, on a one-on-one basis, in case the children needed help in understanding the questionnaire. On the other hand, the children in the control group were asked to fill out the assessment scale right after they watched the movie. No structured debriefing process was provided to the participants in the control group after watching the movie.

Only the researcher was able to recognize the participants' identities from their questionnaires, which could be matched through the use of identifiers (i.e., codes). The participants were not, however, asked to provide their names. Time for completing the instrument was approximately five to 10 minutes for each administration.

Analysis of data

A two-tailed independent samples t-test ($p < 0.05$) was first conducted to determine whether there was a significant mean difference between the two groups on the pretest and post-test scores. A two-tailed paired samples t-test ($p < 0.05$) was then conducted to determine whether there was a significant mean difference between the pretest and post-test for each group. The t-test was considered an appropriate approach given the small sample size in this study (n = 7 in each group), as the t-test is robust with respect to violations of the assumption of a normally distributed sample.[21] Finally, two additional statistical tests [Omega Squared (w2), Effect Size (ES)] were conducted for each test result to estimate the meaningfulness of treatment.

Results

As a result of the independent samples t-test ($p < 0.05$), no significant mean difference was found between the two groups on the pretest on overall aggression level and

Table 3. A summary of within-group t-tests for the dependent measures

Variables	Mean and SD		t-test	
	Control group (n = 7)	Experimental group (n = 7)	t values	p
Verbal aggression (VA)				
Control group	17.57 (7.02)	18.86 (8.51)	-0.86	0.24
Experimental group	18.29 (5.82)	16.86 (5.01)	2.34	0.06
Physical aggression (PA)				
Control group	7.00 (3.51)	9.57 (5.22)	-2.47	0.049*
Experimental group	10.14 (6.07)	8.43 (5.06)	1.01	0.35
Avoidance (Avoid)				
Control group	5.86 (2.61)	5.57 (3.46)	0.28	0.80
Experimental group	4.86 (2.80)	3.86 (2.04)	1.53	0.18
Impulsivity/impatience (II)				
Control group	22.86 (6.47)	24.29 (17.21)	-0.62	0.56
Experimental group	19.43 (5.80)	16.29 (5.12)	1.62	0.16
Aggregate aggression (AA)				
Control group	53.29 (18.11)	58.29 (20.10)	-1.52	0.18
Experimental group	52.71 (17.21)	46.00 (9.76)	1.58	0.16
* Significant at 0.05 level (two-tailed).				

on each subscale of the inventory, indicating that no initial difference existed between the two groups.

Between-group analysis

There was no statistically significant mean difference between the two groups on aggregate (overall) aggression on the post-test. There was, however, a statistically significant mean difference between the two groups on a subscale of the AI, II ($t = -2.80$, $df = 12$, $p < 0.05$) (Table 2). This result indicated that a structured cinematherapy session did help the participants in the experimental group decrease their tendency to be impulsive and impatient. The value of ES was 0.78, indicating that the treatment substantially influenced the outcome. The value of w2 was 0.33, indicating that 33 percent of the total variance in II can be accounted for by the difference in the different treatment methods to the groups.

Within-group analysis

In the paired samples t-test, there was a statistically significant mean difference on a subscale (i.e., physical aggression) between the pretest and post-test within the control group ($t = -2.47$, $df = 6$, $p < 0.05$) (Table 3). The result indicated that the level of the behavioral tendency of physical aggression within the control group significantly increased after the movie night. For this significant difference, the value of ES was 0.73 and the value of w2 was 0.42.

Examining changes in individual raw scores and group means provided some insight into intervention using movies. Specifically, the group mean for the experimental group decreased from 52.71 to 46, and that of the control group increased from 53.29 to 58.29 after the different treatments. Overall, aggressive behavioral tendency decreased among the experimental group, but increased among the control group.

Discussion

The purpose of this study was to examine the effectiveness of cinematherapy; whether it reduced aggressive behavioral tendencies among adopted children with special needs or not. To achieve this objective, the researchers hypothesized that the participants who attended cinematherapy that incorporated cognitive processing would be more likely to report a decreased level of aggressive behavioral tendency than those who attended a movie night that did not use cognitive processing. According to the findings, only one statistically significant difference (i.e., post-test on II) between two groups was found. The result of this study suggested that a session of watching a movie that incorporated the cognitive-behavioral theory was shown to be an effective treatment in reducing II for adopted children who experienced sexual abuse or other forms of abuse from their birth families. This finding is consistent with existing studies regarding the effectiveness of cognitive-behavioral therapy on anger and aggression. For example, Howells, Rogers, and Wilcock[22] conducted a cognitive-behavioral therapy for a group of five adults with learning disabilities. Their findings indicated that all participants reported increased control of their own anger and felt confident that they could use the anger management techniques if the need arose.

In addition, it is interesting to observe a statistically significant difference on physical aggression between pretests and post-tests of the participants in the control group. That is, for the children in the control group, the physical aggression level increased as a result of watching the movie. The mean score of physical aggression among children in the experimental group dropped, however, although there was not a statistically significant difference. In the case of the control group, in which there was no proper cognitive restructuring process, participants may have been reinforced by the aggressive nature of the movie and may have learned to be more aggressive, especially in physical way. In this regard, Bandura's social learning theory may offer one possible explanation.[23] Bandura posited that a major cause of aggression is social learning.[23] According to this theory, children often learn to solve internal conflicts aggressively by imitating aggressive behaviors from other people and media.

The finding of this study partially supported the effectiveness of the cinematherapy that was based on the cognitive-behavioral theory, namely, the structured intervention provided an opportunity for the participants to restructure their cognitive process on aggressive behaviors. More specifically, the cinematherapy that incorporated the cognitive-behavioral theory may have helped clients to examine their maladaptive thinking processes and encouraged clients to change the way they think about themselves and their environments. Thus, the participants in the experimental group had an opportunity to examine their aggressive behavioral tendencies through the structured debriefing process, and to change their maladaptive cognitive process (i.e., II) into a positive and effective way of thinking (i.e., less impulsive and more patient).

At least two important implications can be drawn from the findings of this study. The first implication is the importance of processing in clinical practice. In this study, children in the experimental group showed a statistically significant mean difference between pretest and post-test on II, which is one of the four subscales of AI. In addition, although there were no other statistically significant mean differences between pretests and post-tests on all of the subscales, participants in the experimental group showed decreased scores on the post-test in each subscale. The importance of processing has been emphasized by other researchers.[24-27] For example, Hutchison and Dattilo defined processing as an approach designed to facilitate learning, awareness, and change.[25] They further suggested that processing can improve the effectiveness or outcomes of any therapeutic recreation program or intervention.

The second implication emphasizes the danger of not providing a structured process for certain intervention programs such as cinematherapy. The children in

the control group reported higher aggressive behavioral tendencies after watching the film, particularly in physical aggression. A simple provision of a particular film does not appear to generate desirable program outcomes. Although watching a movie can be merely diversional and without a purpose, it may produce detrimental effects on our children's cognitive processes and their behaviors if the movie contains undesirable contents (e.g., sadness, aggression, risky behaviors).

Despite the interesting results of this study, several methodological issues must be carefully considered when interpreting these results. First, the small sample size (n = 14), age (seven to 14 years old), gender (70 percent female), and ethnicity (64 percent African American) of the participants in this study limit generalizability of the findings. Second, formal follow-up data were not collected; thus, conclusions regarding the maintenance of the intervention could not be determined. Third, the local camp setting precluded transfer of the findings to other settings.

Recommendations for further research include the examination of the effectiveness of cinematherapy in dealing with other types of cognitive or behavioral problems. In other words, effectiveness of cinematherapy should be tested with populations exhibiting diverse psychological problems such as low self-esteem, depression, anger, lack of pro-social skills, etcetera. Whereas this study used only children, future research might need to consider adult populations.

In addition, future studies may involve other types of cognitive-behavioral processing techniques. The process applied in this study was primarily group discussion focusing on cognitive restructuring. However, cognitive-behavioral techniques emphasizing the practice of behavioral aspects such as modeling, role playing, and behavioral rehearsal might be more effective than focusing only on cognitive restructuring process. For instance, Beidel, Turner, and Morris[28] performed an experimental study of 67 children. The experimental program included cognitive restructuring programs and behavioral rehearsal, while the control group focused only on cognitive restructuring. The children in the experimental group acquired significantly higher levels of social skills and interaction practices, and significantly less social anxiety.

Furthermore, future studies should consider using a larger sample size, which would increase the confidence in determining the effectiveness of cinematherapy. Although this study showed moderate effect sizes (0.78 and 0.73) for both analyses, it is desirable to have at least 12 samples in each group when effect size is approximately 0.70 and power is 0.80 (recommended power level in behavioral research).[29]

For this project, only one round of study was conducted because the Respite and Recreation programs are provided only once a month. That span may be regarded as too long an interval between interventions. Therefore, future studies should consider increasing the number of interventions with appropriate intervals between sessions (e.g., several weeks of intervention using a few other movies). Other study questions, such as follow-up tests to detect long-term effects of the cinematherapy, processing on a one-on-one basis, and conducting similar studies with other populations might be interesting and meaningful to re-examine the effectiveness of cognitive-behavioral therapy-based cinematherapy.

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