






Effect of Cognitive Behavior-Anger Management Therapy on Aggressive Behavior in Adolescents

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Abstract

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BACKGROUND: Aggressive behavior occurs a lot in adolescents. There are many negative impacts of aggressive behavior such as decreased productivity, impaired adolescent growth and development, impaired social relations, and a high risk of mental disorders. Education and cognitive behavior-anger management therapy (CBAMT) are some of interventions to reduce aggressive behavior in adolescents.

AIM: The purpose of the study is to know the effect of CBAMT on aggressive behavior in adolescents.

METHODS: The design of the study is quasi-experimental with pre- and post-test with the control group. The place of the study was at Senior High Schools in Central Java Indonesia. The samples were 60 senior high school students with purposive sampling technique. The control group received education using video while the treatment group received education using video and CBAMT. The measurement of aggressive behavior in adolescents was using Buss and Perry questionnaire. The bivariate analysis used independent t-test.

RESULTS: The results of the study indicated significant decrease of aggressive behavior score after interventions both in the control group and treatment group ($p < 0.05$). An independent t-test was performed and showed that there were no significant differences between aggressive behavior score in the control group and treatment group ($p > 0.05$).

CONCLUSION: The finding is education using video and CBAMT is effective to reduce aggressive behavior in adolescents. It is recommended to provide education and CBAMT to avoid and control aggressive behavior in adolescents.

Introduction

Aggression or aggressive behavior is a form of individual emotional expression due to an inability to experience. This behavior can be manifested in the form of actions in the form of damaging objects or attacking other people either verbally or non-verbally which is done with an element of intention. This aggressive behavior is one of the problems that often occur in adolescents. The impact of this aggressive behavior can cause harm to both individuals who engage in aggressive behavior or to individuals who receive aggressive behavior treatment [1], [2].

Aggressive behavior occurs a lot in adolescents. The World Health Organization has conducted a survey on aggressive behavior in adolescents. The results showed that out of 161,082 students, 36–69% of male students and 13–32% of female students had been involved in interschool brawls [2]. Data from the previous study in Indonesia, 2681 adolescents aged 14–20 years old, had aggressive behavior with mean score 3637 (moderate level of aggressive behavior).

The study showed that male adolescents tend to show more aggressive behavior compared to females [3].

One of the occurrences of aggressive behavior in adolescents is because adolescence is a time when individuals begin to experience changes, both physically and psychologically. Entering adolescence, some adolescents interpret that this period is difficult and requires adaptation, which in this adaptation process will affect both physical and psychological conditions [4]. Emotional development in adolescents is a critical period that occurs in individual development. The emotional development of adolescence causes a person to have a high desire to explore something in the environment or people around them that are of their interest. This causes adolescents sometimes can become rebellious or engage in aggressive behavior [5].

There are many attempts to overcome aggressive adolescent behavior, one of which is cognitive behavior therapy. It is a psychotherapy which converts negative thoughts into positive thoughts. Cognitive behavior therapy is a form of communication therapy (Smeets, 2014). The results of the research conducted proved that cognitive behavioral therapy

(CBT) was more effective in reducing aggressive behavior in Grade 9 junior high school adolescents than psychodrama techniques [6]. However, other studies have shown that CBT is less effective in reducing aggressive behavior in children and adolescents, but it can still be recommended to reduce violent behavior in children and adolescents [7].

Another study explains that the CBT approach is effective in reducing anger levels in adolescents with borderline intelligence [8]. The previous study showed that cognitive behavior-anger management therapy (CBAMT) can increase anger control [9]. The results of other studies explain that CBAMT can reduce aggressive behavior in a month [10]. Another study by Smeet (2014) explained that CBT can reduce maladaptive aggressive behavior [11].

A preliminary study conducted at senior high school in Surakarta in February 2021 through interviews with counseling teachers, it was found that there were cases of high school adolescent brawls and several symptoms of aggressive behavior in students such as students speaking harshly, bullying, and hitting others. Efforts that have been made include providing guidance and counseling as well as calling parents. However, these efforts have not been effective because cases of aggressive student behavior still often occur.

The study aimed to determine the effect of CBAMT on the aggressive behavior in adolescents.

Methods

The ethical clearance was provided by Committee of Ethics of University of Kusuma Husada Surakarta with ID number 113/UKH.L.02/EC/IX/2020.

The design of the study was quasi-experimental design pre- and post-test with a control group. The place of the study was at Senior High Schools in Central Java Indonesia. The control group received education using video regarding aggressive behavior and anger management, while the treatment group received education using video and CBAMT.

The population was students at two senior high schools in Central Java. There were 60 senior high school students became the samples (30 students in the control group and 30 students in the treatment group). The samples were selected using purposive sampling technique. The inclusion criteria were students had high score of aggressive behavior (screening of aggressive behavior using Buss and Perry Aggressive questionnaire) and willing and able to participate in the research completely. Respondents who had mental disorder were excluded from the study. The variables of the study were CBAMT (independent variables) and aggressive behavior (dependent variable).

Adolescents' aggressive behavior was measured using Buss and Perry Aggressive questionnaire (BPAQ). BPAQ was created by Buss and Perry in 1992. BPAQ consists of 29 items with response options based on a self-reported Likert scale where each item is given a score of 1–5. The five items are 1 = extremely uncharacteristic of me, 2 = somewhat uncharacteristic of me, 3 = neither uncharacteristic nor characteristic of me, 4 = somewhat characteristic of me, and 5 = extremely characteristic of me. The BPAQ score ranges from a minimum of 29 to a maximum of 116. A low score means no or little aggressive behavior while a higher score means a higher aggressive behavior. BPAQ has a content validity from experts which means it is valid and a Cronbach's alpha value of 0.93 which means it is reliable [12].

BPAQ was completed by the respondents in the control and treatment groups before both groups were given treatment. The treatment group received education and CBAMT. The control group received education using video only. The treatment group received education using video and CBAMT. One week after complete the interventions, there was reassessment or post-test of aggressive behavior scores in both the control and treatment groups using BPAQ.

The education is using video titled "Aggressive Behavior and Anger Management" which made by the researchers and already got the intellectual property right. The duration of the video is about 7:33 s. The other intervention is CBAMT which is consisted of two sessions which is 75 min in each session.

The data were analyzed using univariate and bivariate analysis. Bivariate analysis was using paired t-test and independent t-test. The analysis used statistic test with SPSS.

Results

The results of the study showed that female was dominant both in the two groups (76.6% in the treatment group and 73% in the control group) and all the respondents in the middle adolescent category (Table 1).

Table 1: Adolescents' characteristics (n=60)

Characteristics	Treatment group		Control group	
	N	%	n	%
Gender				
Men	7	23.3	8	26.6
Women	23	76.6	22	73
Age				
Middle adolescent (14–17 years old)	30	100	30	100

The study showed that adolescents who received education and CBAMT in the treatment group had a mean score decrease of aggressive behavior from 105.16 to 88.6, while adolescents who received education only in the control group also showed a

decrease from 98.06 to 90.36. The bivariate analysis using paired t-test indicates $p < 0.05$, there is a difference significantly between aggressive behavior score before and after obtaining interventions both in two groups (Table 2).

Table 2: Aggressive behavior both in the treatment group and control group (n=60)

Variable	Group	n	Mean pre-test	Mean post-test	Mean difference	SD	p-value
Aggressive behavior	Treatment group	30	105.16	88.6	16.56	11.22–11.26	0.000
	Control group	30	98.06	90.36	7.7	13.91–18.04	0.001

The study indicated adolescents in the treatment group had greater decrease of mean score than the control group. Bivariate analysis using independent t-test indicates that $p = 0.651$ ($p > 0.05$). It means that there is no difference significantly between aggressive behaviors in two groups (Table 3).

Table 3: The differences of aggressive behavior score between the treatment and control groups (n=60)

Variable	Group	N	Mean of post-test	SD	Mean difference	p-value
Aggressive behavior	Treatment group	30	88.6	11.26	6.78	0.651
	Control group	30	90.36	18.04		

Discussion

Adolescents' characteristics

Female was dominant in the respondents. The results of the study coincide with the previous study which indicated that female has higher score of aggression than male, but they do not differ significantly to their male counterparts on aggression [13]. However, there are more studies that contradict the results of this study. They indicated that male is more aggressive than female [3], [14], [15]. Male is more aggressive than female because of the authoritarian culture and the result of parenting patterns for male that tends to form aggressive personalities. Community had perceptions that female is expected to be more obedient and less aggressive than men [15].

All the respondents are in the middle adolescent age. Middle adolescent occurs at the age of 15–17 years and characterized by complaining that parents always interfere in their life, sad or moody, and very concerned about appearance [16]. The result of other study shows that the majority of aggression occurs in adolescents with the age of 15 years old (middle adolescent age) and experiencing difficulties in social adaptation [17].

Aggressive behavior both in the treatment group and control group

Aggressive behavior is one of the problems experienced by the adolescents, especially in the senior high school students. Aggressive behavior causes physical or psychological harm to another person.

Aggression itself contains the meaning of attacking, feeling angry, and hostile actions. Aggression is a behavior that can harm or harm others [5]. Aggression is exemplified by hitting and slapping, insulting and threatening, and spreading gossip. In addition, destroying goods, lying, and behavior that aim to hurt others are aggression [18].

Adolescents' aggressive behavior decreased significantly both in two groups ($p < 0.05$). The education using video was applied to the respondents in control group. The education using video about aggressive behavior and anger management can reduce aggressive behavior in the control group with mean score decrease 98.06–90.36. This finding is supported by some previous studies which explained that educations can reduce aggressive behavior by improving the knowledge and practice skills in aggressive behavior management. Education is not only the acquisition of knowledge but also comprises learning to know and do. It is route to make person understand about something and how to handle it [19], [20]. Education which applied to the respondents is about what is aggressive behavior and how to handle it by doing anger management. The education can improve the knowledge and skills of the respondents in handling aggressive behavior.

The effectiveness of education is closely related to the educational media used. Educational media using animated videos is an excellent option of media to increase learning process, knowledge, and practice skill [19]. Animations are an effective media for teaching and learning. The animations can improve learning environment, students motivations, and feedback [20]. The students looked enthusiastic and interested in the animated videos during the educational process. Many students were active in discussions and told about personal experiences related to aggressive behavior they experienced. Students are also motivated to take action to control aggressive or angry behavior after education.

The study indicates greater decrease of aggressive behavior in the treatment group than the control group after the interventions. The educations using video and CBAMT are provided in the treatment group. The interventions decrease aggressive behavior with mean score decrease 105.16–88.6. The additional intervention that is CBAMT performed great effect in reducing aggressive behavior. The result is consistent with the previous study that CBAMT can reduce aggressive behavior. The previous study showed that cognitive behavioral approach can reduce aggressive response. The cognitive behavior therapy can change the expressions in anger. The adolescents were more able to control their anger and showed a decrease aggressive response. They were yelling and uttering harsh words rarely after obtained cognitive behavior therapy [8].

Other study showed that anger management using cognitive behavior therapy can decrease the tendency of anger and increase the adolescents' ability

to control anger [21]. The research explained that there was good effect of cognitive behavior-anger management therapy on anger expressions. The evidence showed that CBT can manage and control anger [22]. Anger management training is training that will help a person recognizes gestures from his body when angry, uses positive self-statements, and learns stress-reducing techniques such as counting down to control his anger.

Conclusion

The research concludes that education using video and CBAMT leads to a significantly decrease in aggressive behavior. The research has identified that CBAMT helps to greater decrease of aggressive behavior than provided education only. The research recommends that CBAMT is a psychotherapy which can be applied to the adolescents to reduce aggressive behavior. The future research should compare the CBAMT with the other psychotherapy.

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