EFFECT OF ANGER MANAGEMENT MODULE USING COGNITIVE BEHAVIORAL THERAPY (CBT) ON ANGER EXPRESSION AMONG THE ADOLESCENTS IN SECONDARY SCHOOL

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ABSTRAK

INTRODUCTION

Anger is one of the basic feelings and a natural human emotion experienced by everyone at one time or another in daily life (Mills, 2005). It is a strong feeling of distress in response to a specific provocation. People become angry when others attack their personality, treat them unfairly, blame someone’s unjustified action, keep them from getting what they want or violate cultural norms (Marby & Kiecolt, 2005). From very early age, people learn to express anger by copying the angry behavior they see modeled around them, and by expressing angry behavior and seeing what they can get away with (Mills, 2005).

Anger can be classed as a mild or intense irritation. Depending on the individual, the circumstance and their emotions, anger may cause a person to become enraged or even furious. People who become angry behave in different ways. Some lash out or become extremely defensive. Others tend to keep their anger to themselves, bottling up their negative emotions and hurt. Yet some become reckless and even abusive. Anger can be a terribly harmful emotion if it is not controlled. When an individual experience anger, it involves a combination of cognitive, physiological, behavioral and social components (O’Neill, 2006). In this paper the researcher describe a pilot study into a short structured, training in self management for angry adolescents.

Purpose

The purpose of this preliminary study was to examine the validity and the reliability of the translated Bahasa Malaysia (BM) version of Adolescent Anger Rating Scale (AARS). The AARS is used by the researcher as an instrument to identify adolescents with high level in anger expressions. Besides, it is to examine the effects of the anger management using cognitive behavioral therapy (CBT) on anger expression among the adolescents in secondary school with anger problem. At the same time, it is for the researcher to gather feedback to revise and refine the instrument and the module before using it in the actual research study.

METHODS

Sample

Sixty-two adolescent boys and girls at the age of 15 to 16 years from two secondary schools in Northeast District of Penang were the target in the
preliminary stage of this study. The selection of schools to be involved in this study was based on stratified sampling from the population in Northeast District of Penang. Finally, two schools with similar demographic characteristics were selected. Both are category ‘A’ school with morning and afternoon sessions located in town. Besides, both are co-educational school type where the population of the school consisted of three main ethnicities such as the Malay, the Chinese and the Indian as Malaysia is a multi-racial and multi-cultural country. All the sixty-two students involved in this preliminary study were assigned by the school authority respectively. They were all physically healthy, able to speak and write Bahasa Malaysia (BM) and English, without any psychiatric disorder or substance dependence or medication records from doctors.

The sixty-two respondents were then given the 41-item AARS instrument to answer. The administration time for the AARS was approximately 25 minutes in groups. Four types of anger expression level such as instrumental anger (IA), reactive anger (RA), anger control (AC), and total anger (TA) could be identified. The T-score value of anger level in the AARS instrument was interpreted according to the guidelines in the professional manual by Burney (2001). Respondents with their T-score value of anger level ranging from 60 and above were recruited in this study as they showed moderately high score in their level of anger expression. According to Burney (2001), respondent with high level of anger expression in Instrumental Anger (IA), Reactive Anger (RA) and Total Anger (TA) and low in Anger Control (AC) indicates that the adolescents are not able to manage their anger problems in an appropriate manner. From the results obtained, only twelve respondents from the sixty-two respondents were identified with moderately high T-score value of anger level through this purposive sampling method.

The twelve respondents are made up of 3 females and 9 males from two schools. According to Jacobs, Masson and Harvill (2009), each group has a minimum of at least 3 members. Therefore, two groups are formed where four respondents are from school X and eight respondents are from school Y. With the consent from the school authority and the parents, all the twelve respondents had attended a briefing session by the researcher where the preliminary study procedures were explained. The twelve respondents were then followed through a 10-weekly CBT group intervention session with the researcher based on the Anger Management Module using Cognitive Behavioral Therapy (CBT). The researcher is also addressed as the counselor/facilitator throughout the group intervention session. To minimize the biasness in administration during the intervention session, the school counselor was involved as assistant to the researcher in this study. The procedure in group session will be discussed in the procedure part.
Effects of Anger Management Module Using Cognitive Behavioral Therapy (CBT) on Anger Expression among Adolescents in Secondary School

Instruments

Adolescent Anger Rating Scale (AARS)

The translated Bahasa Malaysia (BM) version of AARS inventory used in the pretest, posttest, and retention test in this study consisted of 41-item of 4-point Likert-type rating scale (Burney, 2001). The Likert-type rating scale ranges from “Hardly Ever” to “Very Often”. It was used to measure specific styles of anger among the respondents such as the reactive anger (RA) – 8 items, the instrumental anger (IA) – 20 items, and anger control (AC) – 13 items among respondents. Each item was rated according to how frequently the anger and/or behavior occurred (Burney, 2001).

The original AARS instrument is written in English version by Burney (2001). It has been used by many researchers in overseas countries because of its high validity in construct and content (Burney, 2001). Besides, it has been shown to be reliable where its consistency scores over time are high with Cronbach’s alpha coefficient value ranged from 0.81 to 0.94 (Burney, 2001). However, the instrument needs to be tested at the internal consistency level according to the culture and the school environment in Malaysian context.

Anger Management Feedback Questionnaire

The Anger Management Feedback questionnaire constructed by the researcher based on the contents in the module consisted of three components. Component A was the respondents demographic particulars, component B consisted of 7-item of 5-point Likert-type rating scale. The Likert-type rating scale ranges from “Fully Agree” to “Fully Disagree”, while component C consisted of two open ended questions where the respondents gave their responses in briefly written answers. The questionnaire was administered at the end of the intervention sessions. It is a tool used by the researcher for triangulation purpose in data collection and to obtain overall feedback on the effect of CBT interventions in anger management. The questionnaire has been validated by six experts from various fields on its content. They are the psychologist, counselors, psychometric, and language experts. The feedback from the experts was to revise and improve the items in the questionnaire. The feedback from the
respondents in the questionnaire will be reported in descriptive forms in the results findings.

Anger Management Module Using Cognitive Behavioral Therapy (CBT)

The anger management module was developed by the researcher based on the Cognitive Behavioral Theory which combines the interventions from both Behavioral Theory and Cognitive Theory besides references from a few resources by O’Neill (2006), Freedman (2009), and Reilly, Shopshire, Durazzo and Campbell (2002). There were ten sessions in this module, ranging from 90 minutes to 120 minutes duration. According to Jacobs, Masson and Harvill (2009), the therapy sessions usually lasted for one and a half hours and not longer than three hours per session. The ten weeks group psycho-educational counseling sessions based on CBT interventions involved cognitive restructuring including self-monitoring homework such as the thoughts diary and the anger thermometer; relaxation; communication skills including role playing; and problem solving routine. The module consisted of detailed descriptions and specific instructions for the counselor or facilitator. It also included handouts such as tables and figures that illustrated the key conceptual components of the treatment, group sessions activity worksheets and homework assignments for the respondents. The content of the module has been validated by six experts from various fields. They are the psychologist, the counselors and the language experts. The internal consistency of the module was tested by the researcher with a set of 68-item questionnaire of 5-point Likert-type rating scale during this preliminary study. The 68-item was developed based on the objectives in the 10-weekly group intervention session.

Procedures

To suit to the culture in Malaysia where language is concern, Bahasa Malaysia (BM) is the national language used in all government aided schools in Malaysia. Therefore, the AARS inventory was translated into BM version by the researcher with written permission from Psychological Assessment Resources (PAR) on one condition where the final version of the translated AARS test booklet shall be in the same format and structure as the published English forms. The translated BM version was validated by six experts from various field, they are the psychologist, the counselors and the language experts. A back-translation was also carried out as required by PAR on the translated BM
version by another language expert who is very well versed in English language but is unfamiliar with the English version of the AARS. The back-translated English version together with the translated BM version was sent back to PAR for review by their language specialist. The translated version was revised again based on the comments given by PAR and were sent back to PAR for review again. Finally, approval and permission were given by PAR to use the translated BM version of the AARS inventory for this preliminary study and in the actual field study later.

As for the anger management module using CBT, it is written in a simple English version by the researcher according to the language understanding level of the adolescents in secondary schools in Malaysia. Besides, the module was written for a purpose that is to be used by school counselors and educators who work with adolescents with anger management problems in group counseling settings. According to Russell (1974), and Majid Konting (2004), before a module is used in an actual field work, the content of the module need to be validated by the experts. This anger management module using CBT was validated using a set of 5-item questionnaire with 5-point Likert type rating scale ranging from “Fully Agree” to “Fully Disagree” (Sidek and Jamaludin, 2005) by six experts from various field, they are the psychologist, the counselors, and the language experts. Besides, the experts also gave their additional comment on the content in the module. All the suggestions and comments given worked as guideline for the researcher to revise, improve and fine tune the content of the module. Its internal consistency was test by the researcher with a set of 68-item questionnaire of 5-point Likert-type rating scale. The 68-item was developed based on the objectives in the 10-weekly group intervention session.

**Administrative Procedure**

Before this study can be carried out in schools, the researcher has sought permission and approval from a few authorities. They were the Director of Education Planning and Research Department (EPRD), Ministry of Education, Malaysia; the Director of Penang State Education Department (JPN), and the school administrator. Permission to carry out this study was granted by the respective authorities. The administrators from both secondary schools X and school Y and the respondents’ parents had also granted the permission and consent for their students/children to be respondents in this study.

A detailed briefing on the purpose and procedures in conducting this study including the procedures in administering the AARS inventory were given to the administrator and the school counselor from both schools. A total of 62
Form four students between the ages of 15 to 16 were the respondents involved in this study. They were assigned by the school administrator with 30 respondents from school X and 32 respondents from school Y respectively. The sixty-two respondents involved were administered the 41-item in AARS in their school respectively on different appointed dates. The materials for the AARS were organized and distributed to the participants. The school counselors were given clear written instructions on its administration. The administration time was approximately between 20-25 minutes in respondent’s respective classes arranged by the school administrator. The purpose was to identify adolescents with high level of anger expression to be recruited in this study. The internal consistency of the translated AARS version was later analyzed using the statistical analysis, SPSS version 18.0.

Only twelve respondents from both schools, where four from school X and eight from school Y were identified with moderately high T-score value of anger level from the AARS inventory. They were recruited as the respondents for this preliminary study. All the respondents from both schools had followed through a 10-weekly group CBT intervention session conducted by the researcher who was also addressed as the counselor/facilitator in this study with the help of the school counselor. The purpose was to examine the effect of CBT interventions on anger management among the adolescents. At the same time, to provide help for the angry respondents to apply the interventions learned in managing their anger problem. A post-test using the AARS instrument was administered to all the respondents at the end of the tenth session. The results from the post-test and the pretest were used to justify the effect of the CBT intervention in anger management. A paired-samples t-test was computed by using SPSS version 18.0 to compare the significant differences between the pretest and the post-test results, which is before and after the intervention.

At the end of the tenth session, the respondents were also required to answer the “Anger Management Feedback Questionnaire” conducted by a third party who was not known by the respondents. The results obtained were reported in descriptive form. The purpose to conduct the questionnaire by a third party was to obtain a non-bias, genuine and solid feedback from the respondents. At the same time to provide feedback for the researcher to modify and to further improve the content and the activities in the module before it is used in the actual research study.

Finally, a retention session was conducted a month after the completion of ten intervention session. The 12 respondents were returned to their group respectively to give feedback on their progress to the group and to the researcher. During this session, the researcher administered the AARS instrument again. A paired-samples t-test was used to compare its significant differences between the post-test and the retention test. The purpose is to see
whether the effect of the anger management using CBT intervention learned during the 10 weekly group session was maintained after a month of interval period. The data collected from this retention session were analyzed statistically using the SPSS version 18.0. The findings were reported in the results component. To further confirm the respondents’ progress, the discipline records of the respondents were looked into through a brief interview with the school counselor and discipline teacher.

**Treatment Procedure**

The ten-weekly treatment sessions were on average 90 minutes to 120 minutes per session. In the beginning part of each session, the respondents were to review their homework and give their feedback on the intervention learned in previous session. The group therapy sessions from Session 1 to Session 9 involved the cognitive restructuring intervention including self-reported thought diary and anger thermometer, relaxation intervention, communication skills including role-playing, and problem solving routine. At the end of each session, respondents were given notes to read and self-monitoring homework as further practices throughout the whole week. The tenth session which is the closure including termination of group intervention session was carried out in which respondents were given the opportunity to give feedback and to share how much they had benefited from these ten weekly group session. At the same time, closure was carried out by the researcher to clear all doubts, and any unfinished business among the respondents before the termination of group session. At the end of this session, the respondents were reminded to come back a month later for a retention session to review their progress.

**RESULTS**

The validity of the translated BM version of AARS done by the experts showed that 37 items in the questionnaire were given the scores between “Accurate” and “Very Accurate” except item 2 and item 11 were responded as inaccurate by two experts, and item 9 and item 28 were responded as inaccurate by one expert. However, the translated BM version of AARS showed high internal consistency with Cronbach’s alpha value of 0.723 (Table 1, Appendix1).

As for the anger management module using CBT, the results obtained regarding the content of the module showed that all the experts had agreed with item 1 and 2 where the content of the module fulfilled the target population. The contents were cleared and could be implemented properly. However, one expert marked not sure for item 3, 4, and 5. The comment given was that item 3, 4, &
5 could only be determined accurately after the module was tested in the preliminary study on the students with anger problem in the group counseling session. Additional suggestions and comments were also given by the experts for further improvement on the content of the module like to add in “open minded and respect others” to be added in to Appendix 1 on “Code of Ethics in group counseling” in the module; “use more graphic in the activities to make the module looked more interesting”; “the format of the module needed to be uniformed”. All the comments and suggestion obtained from the feedback by experts is to help the researcher to revise, improve and fine tune the module. The internal reliability of the content of the module was tested. The Cronbach’s alpha value of 0.883 had shown that the module commands high internal reliability.

Furthermore, the results obtained from the anger management feedback questionnaire which consisted of five items in Part A(a) with 5-point Likert-type rating scales showed that all the twelve respondents responded that they agreed that item 1,3,4, and 5 which they had learned during the 10-weekly group session had benefited them in managing their anger problem. The activities and homework given in each session had helped them to understand and to manage their anger problem better, and had agreed that they will continue to practise using their own anger control plan to manage their anger in future. Whereas item 2, only one respondent mentioned that more time should be allocated for each session. As for Part B of two items with 5-point Likert-rating scales showed that all the respondents agreed that they could understand every session taught by the facilitator/researcher as they agreed that the facilitator/counselor knows her work well.

The briefly written feedback comments in Part A (b) had shown that all the twelve respondents agreed that relaxation through slow deep breathing worked effectively on them as compared to progressive muscle relaxation especially when they were in an anger provoking situation. Besides, the respondents also mentioned that the cognitive restructuring, the communication skill and the problem solving intervention learned during the intervention sessions had helped them effectively in managing their angry thoughts and emotions. However, most of the respondents suggested in Part C that the two sessions on communication skill should be combined into one session.

The effect of the CBT used in the module for anger management among adolescents in secondary schools was examined by using the paired-samples t-test to see the significant level of differences between the pretest and post-test, and between the post-test and the retention test. From the statistical analysis shown in Table 3b (Appendix 2), the significant level of $p = 0.002$ ($p < 0.05$). The result showed that there was significant difference between the pretest and the post-test. The statistical analysis shown in Table 4b (Appendix
3), the significant level of \( p = 0.179 \) (\( p>0.05 \)). The result showed that there was no significant difference between the post-test and the retention test. Therefore the null hypothesis (\( H_0 \)) cannot be rejected.

To examine the differences in anger expression before and after the CBT intervention between the male and the female adolescents in secondary school, the researcher used the independent-samples t-test. The dependent variable before CBT intervention was the pretest results, whereas the dependent variable after CBT intervention was the post-test results. The statistical analysis shown in Table 5b (Appendix 4), the significant level of \( p = 0.625 \) (\( p>0.05 \)). The results showed there was no significant difference in anger expression between male and female adolescents before the CBT intervention program. Therefore, the null hypothesis (\( H_{0a} \)) cannot be rejected. As for Table 6b (Appendix 5), the significant level of \( p = 0.287 \) (\( p>0.05 \)). The results showed there was no significant difference in anger expression between male and female adolescents after the CBT intervention program. Therefore, the null hypothesis (\( H_{0b} \)) cannot be rejected.

To examine differences of anger expression between male and female adolescents in retention session, the researcher used the independent-samples t-test where the retention test is the dependent variable. Table 7b showed that the significant level \( p = 0.579 \) (\( p>0.05 \)) which means there was no significant difference in retention of anger expression between male and female adolescents in secondary schools. Therefore the null hypothesis (\( H_{3} \)) cannot be rejected. In addition, feedback from the school counselor and discipline teacher based on respondents discipline record also supported the statistical findings. The respondents has no new records reported in discipline problem related to anger or caused by anger throughout the one month interval period after they had completed the 10-weekly intervention sessions.

**DISCUSSION**

The purpose of this preliminary study was to examine the effect of the CBT intervention used for anger management in the module in reducing anger behavior among adolescents in secondary schools. The twelve respondents involved in this study had completed the 10-weekly group intervention sessions. Based on the analyses results obtained from the participants self-reported AARS questionnaires, there were different types of anger expressions identified as mentioned by Burney (2001) such as reactive anger, instrumental anger and anger control among the male and female adolescents in secondary schools.

The result findings also showed that the instruments such as the AARS inventory, the anger management module using CBT, and the anger
management feedback questionnaire is relevant to use in this study, and later in the actual research study. The content of the module and the anger management feedback questionnaire was validated by experts and were ready to be used. The comments given by the experts had helped the researcher to revise and fine tune the feedback questionnaire. Furthermore, the translated BM version of AARS and the anger management module using CBT interventions had been tested for its reliability coefficient value in this study. The Cronbach’s alpha value of 0.723 of this translated version of AARS indicated high internal consistency of the instrument. Therefore, the instrument is suitable to be used to identify students with high anger level to be referred as respondents to the intervention program. The Cronbach’s alpha value was supported by Borg, Gall and Gall (1993), that the value of the coefficient of reliability must be at least 0.60, whereas Fraenkel and Wallen (1996) stated that the reliability coefficient value of the instrument or an activity module is 0.70, and Othman Mohamad (2000) stated that the reliability coefficient value between 0.60 to 0.85 can be accepted.

As for the anger management module using CBT interventions, the comments and suggestion obtained from the experts from various fields had also allowed the researcher to revise, improve and fine tune the module. The Crohbach’s alpha value of 0.883 had shown that the module commanded high internal reliability. Hence, the module and the instruments are ready to be used in the actual research study later.

The feedback results from the anger management feedback questionnaire showed that all the twelve respondents had agreed that the anger management using CBT intervention learned in the past ten weeks group sessions had benefited them. The results finding was consistent with the previous research studies by Rebsdorf (2012); and Beck and Fernandez (1998) that CBT is effective especially when it comes to curing behavioral problems including anger. The respondents also agreed that they understood every session in the module taught by the researcher and the researcher knows her work well. According to Sharifah Alwiah Alsagoff (1981) the module builder can give a clearer picture of how the module can be carried out and can be beneficial to users. The activities and homework given in each session had also helped the respondents to understand and to manage their anger problem better. According to Reilly and Shopshire (2002), homework and hands-on activities reinforced the concept and techniques learned in group sessions. The respondents had agreed that they will continue to practise using their own anger control plan to manage their anger in future.

On the other hand, the time allocated for each session was sufficient. Eleven respondents had agreed that the time allocation between 90 minutes to 120 minutes for each session is sufficient. This feedback from respondents was supported by Jacobs, Masson and Harvill (2009). However, there is only one
respondent was suggested that the time allocated for the intervention sessions should be longer. In addition, the briefly written feedback obtained from the open ended questions in the questionnaire showed that all the twelve respondents had mentioned that the relaxation through slow deep breathing worked effectively on them as compared to progressive muscle relaxation especially when they were in an anger provoking situation. Besides, the respondents also mentioned that the cognitive restructuring, the communication skill and the problem solving intervention learned during the intervention sessions had helped them effectively in managing their anger thoughts and emotions. However, most of the participants suggested that the two sessions on communication skill should be combined into one session.

All the constructive suggestions and comments received were taken seriously by the researcher as guideline to revise, improve and fine tune the content of the module. The feedback from the respondents had allowed the initial ten chapters module used in this preliminary study to be reduced to only eight chapters for the actual research study later. The reason given was the relaxation intervention using progressive muscle relaxation which has been found to be less effective and difficult to be applied in an anger-provoking situation. At the same time, the two sessions on communication skills were also revised and combined to become one session. Finally, the module was successfully revised to 8 chapters and it is ready to be used in the actual research study.

In quantitative analysis, paired-samples t-test was used to analyze the effect of CBT for anger management among the adolescents because there is only one group which is the treatment group involved in this study (Gay, Mills, & Airasian, 2011). On the other hand, the independent sample t-test was used because it involved two different groups, the male and the female groups (Gay, Mills, & Airasian, 2011). The statistical analyses from these two types of tests were sufficient to identify the effect of CBT for anger management among the adolescents in secondary schools. The results findings showed that there were significant differences between the pretest and the post-test in the paired-samples t-test had explained that the CBT interventions were effective for anger management. Besides, there was no significant difference between the post-test and the retention test has further confirmed that the effect of the CBT interventions maintained after a one month interval.

Furthermore, the reduction in the respondents T-score value in reactive anger, instrumental anger and increased in respondents T-score value in anger control in their AARS post-test results relative to the pretest results which was computed manually by researcher has also proven that all the twelve respondents had benefited from the CBT interventions in anger management.
The reductions in anger level and the increased in anger control level explained that the respondents had better control over their anger problem after completing the 10-weekly group intervention sessions using CBT. The results obtained were referred to the guidelines for interpreting AARS T-scores by Burney (2001). This result’s findings were consistent with the research findings carried out by Rebsdorf, 2012; Beck & Fernandez, 1998; and Trafate, 1995 that CBT treatments have been found to be effective, time-limited treatments in reducing anger problems.

On the other hand, statistical analysis also showed that there is no significant difference in anger expressions between male and female adolescents before and after the intervention and no significant difference in the retention session on anger expression between male and female as compared to the post-test results. With this result, it is again strongly agreed that the CBT interventions in this anger management module is effective to help the respondents to manage their anger by simply applying the intervention they had learned in their real life situations irrespective of gender differences.

Finally, feedbacks from the qualitative analysis obtained from brief interview with the school counselor and the discipline teacher reported that there were no new records in discipline problem related to anger or caused by anger throughout the one month interval period after the completion of 10-weekly group intervention sessions. The findings had again been consistent with the quantitative analysis that the respondents had better control in their angry thoughts and emotions after completing the 10-weekly group CBT intervention session.

**CBT for Anger Management**

Cognitive Behavior Therapy (CBT) is based on the CBT theory and model which focuses on the four key elements of psychological distress which involved the thoughts, the feelings, the behavior and the relationships between them (Simmons & Griffiths, 2009) which is shown in Figure 1:

![Figure 1: The CBT model, Simmons and Griffiths, 2009](image-url)
All these elements of distress are inter-related. According to Reilly and Shopshire (2002), the most unwanted thinking patterns, emotional and behavioral reactions are learned over a long period of time. The aim of CBT is to identify the unhelpful thinking that is causing a person’s unwanted feelings and behavior and to learn to replace this thinking with more realistic and balanced thoughts. A change in one element can produce a change in any one of the others. In this way, a negative change in one element can start a ‘negative vicious cycle’ through the impact that it has on the other elements of psychological distress. Hence CBT interventions target the thoughts, feelings and physical sensations to produce positive changes in the client’s emotional state. It is needed to break the vicious cycles by creating positive changes in one or more elements of the psychological distress.

CONCLUSION

Anger may be a normal and healthy emotion, but when anger over-rulled an individual’s life such as making them destructive and violent, then anger is a big problem. One can break the anger cycle by learning how to manage their anger in a more constructive and effective way. This preliminary study indicated that the Integrated Anger Management Module using CBT interventions has the potential and can be used effectively with angry adolescents in reducing and controlling their anger. All the comments and suggestions obtained had been good guidelines for the researcher to carry out the necessary steps to revise, improve and fine tune the content of the module. Finally, the module was successfully revised, improved and refined to be used in the actual field of work in future.

REFERENCES


