

TRANSLATION AND ADAPTATION OF ANGER MANAGEMENT/THINKING ERROR CORRECTION SECTION OF THE EQUIP PROGRAM: A QUASI EXPERIMENT TO ASSESS THE CHANGE IN AGGRESSION LEVEL AND COGNITIVE DISTORTION

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Abstract

The present study aims to translate and adapt an anger management/thinking error correction section of the EQUIP program to reduce aggression levels and improve thinking errors among juvenile delinquent and runaway adolescents. Through the purposive sampling technique, a sample of juvenile delinquents and runaway adolescents (N = 10; M = 7, F = 3) was taken from a rehabilitation center working for the betterment of abused children in Lahore, Punjab, Pakistan. Urdu translated versions of the Reactive-Proactive Aggression Scale (Raine et al., 2006) and the How I Think Questionnaire (Barriga et al., 2001) were used as pre-test and post-test level observations to evaluate the differences between changes before and after the implementation of a specific curriculum. Results of the Wilcoxon Signed-Rank Test revealed significant lower scores on post-level measures along reactive aggression, self-centeredness, blaming others, assuming the worst, and HIT total scores, suggesting a visible improvement in juveniles' behavior in the form of lower levels of aggression and cognitive distortions after the introduction of the intervention plan.

Key Words: Aggression, Juvenile Delinquents, The EQUIP Program, How I Think Questionnaire

INTRODUCTION

Cognitive developmental theory (Blasi, 1980) suggests that moral cognition plays an important role in inclination towards immoral behavioral practices that result in delinquent behavior. According to this perspective (Gibbs, 2019), antisocial behaviors are a byproduct of immature moral judgments influenced by egocentric bias that result in delay in moral development (DiBiase et al., 2010). Hence, literature suggests less maturity in moral judgments among delinquents as compared to non-delinquents (Blasi, 1980; Gregg et al., 1994). As per this cognitive behavioral perspective, there are many intervention programs aimed at bringing improvement in socio-moral development with the aim of bringing reduction in antisocial behavior tendencies and delinquent behavior among youth (Sansakorn et al., 2024).

The EQUIP program, as a promising initiative, utilizes a peer-helping approach to prepare and motivate youth to think and act rationally (Gibbs et al., 1995). This program is developed for behaviorally compromised and antisocial youth aims to equip and motivate young individuals to mutual understanding and being helpful toward each other (Ahmed et al., 2023). Mutual help meetings provide insight about strengthening the bond through direct help for individuals who experience cognitive distortions with moral judgment delays and seek help to control their anger and aggression levels (Mushtaque et al., 2021). The complete program is comprised of three sections: anger management/thinking error correction, social skills development, and social decision-making. Each comprising 10 sessions (Gibbs et al., 2009).

The Positive Peer Culture perspective stresses the influential effects of peer pressure on shaping behaviors (Vorrath & Brendtro, 1985; Lyman et al., 1993). The basic motive of the PPC paradigm is to explicitly change the morally compromised peer culture into a well-behaved and morally grounded peer culture, where people are responsible for their doings and provide assistance to each other with the intention of virtue and good will (Gibbs et al., 1996; Kovach, 2013; Vorrath & Brendtro, 1974).

The EQUIP program holds two distinct qualities that make it fairly effective to implement on morally compromised and antisocial youth. Firstly, EQUIP, as a multi-component intervention plan, not only teaches multiple valuable assisting skills but also motivates individuals to practice these skills in a peer group setting. Secondly, the EQUIP program holds the potential for reducing the reoccurrence of delinquent activities (recidivism), a conclusion employed by the results of an initial version of this program (Leeman et al., 1993). By keeping in mind the efficacy of the EQUIP program in reducing aggression levels and improving thinking errors,

this study aimed to translate the contents of the aggression management/thinking error section of the EQUIP program into Urdu with adaptation of the related concepts according to age and cultural appropriateness. Further evaluating the effectiveness of the treatment plan through a quasi-experiment with pretest-posttest within-subject design.

Hypotheses

- There will be a reduction in the aggression level of delinquents’ post-test scores after the implementation of treatment.
- There will be a reduction in the cognitive distortions level of delinquents’ post-test scores after implementation of treatment.

METHODS

Research Design

A pretest-posttest within-subject quasi-experimental research design assessed participants at pre- and post-levels. Comparisons were noted to check the effectiveness of treatment.

Sample

Through the purposive sampling technique, a sample of juvenile delinquents and runaway adolescents (N=10; Age=12-17) was approached from rehabilitation centers providing services for the welfare of neglected and abused children in Lahore, Punjab, Pakistan.

Sample Inclusion Criteria

- Delinquents with a history of behavioral issues, especially anger issues, were identified through data provided by the institute.
- Participants with ages between 12 and 17 were selected for the group sessions.
- Participants who showed willingness and interest were selected as a sample.

Sample Exclusion Criteria

- Individuals with a probability of being released by the institute on the court’s order or shifting to another branch in the span of the coming two months’ time were excluded.
- Participants who were not cooperative and reluctant to the baseline protocols were excluded from the study.

Instruments

The Reactive–Proactive Aggression Questionnaire

The RPQ, developed by Raine et al. (2006) and translated by Naheed et al. (2015), is based on 23 items ($\alpha = 0.82$). 12 items measure the constructs of reactive aggression, and 11 items measure proactive aggression on a 3-point rating scale where responses move from 0-2, indicating never, sometimes, and often respectively.

How I Think Questionnaire

The HIT is developed by Barriga et al. (2001; $\alpha = .63$ to $.96$) to assess cognitive distortions (self-serving) among adolescents. As a 54-item scale (6-point rating scale, ranging from strongly agree to strongly disagree, 1-6), it consists of six subscales: self-centeredness, minimizing/mislabeling, blaming others and assuming the worst, anomalous responses, and positive fillers. The AR subscale identifies socially desirable responding, hence creating doubtful observations, and identifies the cases that are liable to be excluded from the sample. The HIT scale was translated into Urdu for the present study by using the forward and backward translation method.

Procedure

After meeting all the permission protocols from the Director General, Punjab data was collected from participants residing in a rehabilitation center working for the welfare of neglected and abused children in Lahore, Punjab, Pakistan. Participants were debriefed about the purpose of the research, and informed consent was taken from them. The researcher was accompanied by a trainer with expertise in cognitive behavioral therapeutic techniques with the intention of best implementing the treatment program. The HIT and RPA scales were used to identify differences between pre- and post-test measure results.

Table 1: Sessions Details

Mutual Help Meetings	
Week 1	
S1	Rapport Building
S 2	Life story meeting (family information, things that happened in your life, your common problems and thinking errors, and short-term and long-term goals)
S3	Baselines (pretest observations to assess aggression levels and cognitive distortions by using HIT and RPA scales)
S4	Filling out the form related to the individual performance plan. Reporting of participant’s strengths, general, behavioral, educational, employment, and other goals, with individual thinking patterns.
Week 2	

S 1	Analyzing and reporting of specific and general problems. Among general problems, the specific curriculum has identified low self-image (insecurities about self), inconsiderate of self (self-harming tendencies), and inconsiderate of others (indulging in activities that are destructive for others). The curriculum identified authority problems, aggravating others, easily angered, easily misled, misleading others, alcohol consumption, lying, fronting, and stealing as specific problems.
S 2	Revising and practicing the concepts of session 1
S 3	Identification of thinking errors. Introduction of self-centeredness as a primary-level thinking error, and assuming the worst, minimizing/mislabeling, and blaming others as secondary-level thinking errors.
S 4	Short stories on assuming the worst and blaming others.
Week 3	
Equipment meetings	
S 1	Introduced what anger and aggression are and their advantages (feeling powerful) and disadvantages (causing troubles, compromising people's trust in you) in detail.
S 2	Introduction of the activity 'a clown in a ring'
S 3	Participants filled out a form entitled "Evaluating and Relabeling Anger and Aggression." (Listed a few advantages and disadvantages of being in the state of anger; listed some anger-provoking scenarios; the participant drew a clown in a ring with their own perspective and identified the strings in terms of name-calling and foul language.
S 4	Introduction to the anatomy of anger. The AMBC model was explained in fragments, e.g., A = Activating event; M = mind activity; B = body reaction; C = consequences.
Week 4	
S 1	Introduction of self-talk anger reducers. How to practice self-talk anger reducers before a triggering event, positive self-talk while confronting a trigger, and after an aggressive episode.
S 2	Form filling related to the anatomy of anger. (Questions were answered regarding any confusion in understanding of the AMBC model and self-talk anger reducers.)
S 3	Introduction of Ali's thinking errors (identification of thinking errors in Ali's thinking, specifically during and after the aggressive episode). What self-talk anger reducers did Ali practice?
S 4	Continuation of lecture on Ali's thinking errors.
Week 5	
S 1	Introduction of the concept of thinking ahead of time with if and then as self talk anger reducers.
S 2	Practicing the "if and then" self-talk anger reducers through role-playing.
S 3	Practicing the concepts of self-evaluation and constructive self-talk as anger reducers.
S 4	Reversing: revision of concepts of blaming others and self-centeredness. This session focused on the error that individual experience while blaming others.
Week 6	
S 1	Revision of the concept of reversing. The researcher explained more examples of self-centeredness and blaming others.
S 2	Understanding of 'victim' and 'victimizer.' (Robbery at grandparents' house, your reactions and feelings.
S 3	Detailed discussion on the mind of a victimizer with a special focus on a delinquent's attitude towards victimizers.
S 4	Post testing was performed.

RESULTS AND DISCUSSION

In this study 70% of data belonged to males and 30% to females with an age range between 12 and 17 years. All participants came from lower socioeconomic statuses. 50% of the cases belonged to the juvenile delinquent category, and 50% were runaways' co morbid with delinquency. 60% of participants worked as house help in the past, and 100% experienced physical abuse before being rescued by authorities.

Table 2 Wilcoxon Signed Rank Test Results for Aggression Pre-Test/Post-Test of Experimental Group

Dimension	Post-test— Pre-test	N	Rank Average	Total Rank	Z	P
Reactive aggression	Negative Rank	9	5	45	-2.67	.01
	Positive Rank	0	0			
	Equal	1				

Proactive aggression	Negative Rank	4	3.8	15		
	Positive Rank	6	6.5	39	-1.22	.22
	Equal	0				
Reactive proactive aggression (total scores)	Negative Rank	2	4	8		
	Positive Rank	8	5	47	-1.99	.06
	Equal	0				

**p<.01

It was hypothesized that there will be a reduction in the delinquent’s aggression level post-test scores after implementation of treatment. A Wilcoxon Signed-Rank Test was performed to examine the differences among pretest and posttest measures along reactive aggression, proactive aggression, and reactive-proactive aggression total score. The result revealed a significant difference between the scores before and after the intervention along reactive aggression, $z = -2.67$, $p < .01$. The rank table showed nine negative ranks ($N=9$, Mean Rank=5, Sum of Ranks=45), indicating that the posttest scores of 9 out of 10 delinquents are lower than the pretest measure, indicating the effectiveness of the treatment to lower the reactive aggression levels among juvenile delinquents.

Table 3 Wilcoxon Signed Rank Test Results for Cognitive Distortions Pre-Test /Post –Test of Experimental Group

Dimension	Post-test—Pre-test	N	Rank Average	Total Rank	Z	P
Self-centeredness	Negative Rank	10	5.50	55	-2.80	.00
	Positive Rank	0				
	Equal	0				
Blaming others subscale	Negative Rank	9	5.83	52.5	-2.55	.01
	Positive Rank	1	2.50	2.5		
	Equal					
Minimizing/Mislabeling	Negative Rank	8	5.75	46	-1.88	.06
	Positive Rank	2	4.50	9		
	Equal	0				
Assuming worst	Negative Rank	10	5.50	55	-2.81	.00
	Positive Rank	0				
	Equal	0				
HIT Total score	Negative Rank	9	5.22	47	-1.99	.05
	Positive Rank	1	8.00	8		
	Equal					

p≤.05; **p≤.01, *p<.001

It was hypothesized that there will be a reduction in the delinquent’s cognitive distortions level post-test scores after implementation of treatment. A Wilcoxon Signed-Rank Test was performed to determine the differences between pretest and posttest measures along self-centeredness, blaming others, minimizing/mislabeling, assuming the worst, and HIT total score. The result revealed a significant difference between the scores before and after the intervention along self-centeredness ($z = -2.80$, $p < .001$), blaming others ($z = -2.55$, $p < .01$), assuming the worst ($z = -2.81$, $p < .001$), and HIT total scores ($z = -1.99$, $p < .05$). Along with self-centeredness, the rank table showed 10 negative ranks ($N=10$, Mean Rank= 5.50, Sum of Ranks = 55), indicating that all the cases reported lower mean scores in the post-test measure. Along with blaming others, the rank table showed that there are 9 negative

ranks (N=9, Mean Rank=5.83, Sum of Ranks=52.5), demonstrating that 9 out of 10 delinquents' posttest scores are lower than the pretest measures. Along with assuming the worst, the rank table showed 10 negative ranks (N=10, Mean Rank=5.50, Sum of Ranks=55), demonstrating that all cases reported lower mean scores in the post-test measure. Along with how I think questionnaire total scores, $z = -1.99, p < .05$, the rank table showed 9 negative ranks (N = 9, Mean Rank = 5.22, Sum of Ranks = 47), demonstrating that 9 out of 10 of the delinquents' posttest scores are lower than the pretest measures. These results suggest a visible improvement in juveniles' cognitive distortion level after the introduction of the intervention plan.

Table 4 Categories evolved from Participants Responses from Mutual Help Meeting and Equipment Meeting Forms

Type of Form	Theme	Categories	Frequency	
Life story	case specification	Drug selling with begging	4	
		Stabbed the master	1	
		Verbal/physical abuse by caregivers/landlords/factory owners	5	
Individual performance plan	Strengths	Well-mannered	1	
		Good in studies/ recitation/ extracurricular activities (poker, cricket)	8	
		Motivation to learn car driving	1	
		Motivation to learn drawing and music	4	
	Individual thinking and related behaviors	Anger issues	4	
		Pessimistic thinking	2	
		Self-centered	2	
		Blaming others	3	
		Lying	3	
		Manipulation	1	
		Thoughts about wrong deeds (adultery)	1	
		Imagine stories	1	
		My behavioral problems	Low self image	2
			Inconsiderate of others	4
	Inconsiderate of self		4	
	Authority problem		4	
	Aggravates others		4	
	Easily angered		8	
	Easily misled		3	
	Misleads others		4	
	Alcohol/drug problem		7	
	Lying		9	
	Stealing	8		
	Fronting	2		
	Occupational goals	Motivated to		
		<ul style="list-style-type: none"> • become an Army officer/singer/pilot/doctor • do a motorcycle repairing course • become a computer engineer • support my family's everyday expenditure • Learn music • Do a furniture making course. • Excel my potential in business like my role models (Sultans). 		
Problem names	Identification of triggers	<ul style="list-style-type: none"> • Scolding from teachers/caregivers • Physical abuse from others 		

		<ul style="list-style-type: none"> • Dominating attitude of others. • False blaming from others. • When others try to take what is mine. • Rejection from friends • Lack of endorsements from others. • Lack of self-control in the state of anger.
	General problems	
		Low self image
		<ul style="list-style-type: none"> • Being offensive on bad labels • Dominating behavior of others • Lack of trust in others
		Inconsiderate of self
		<ul style="list-style-type: none"> • Self- mutilation • Lack of self-confidence • Lack of assertiveness
		Inconsiderate of others
		<ul style="list-style-type: none"> • Blaming others • Teasing others for amusement • Physically abusing others
Thinking errors	Primary thinking errors	
	Self centered	
		<ul style="list-style-type: none"> • Being aggressive to know what's going on in others' mind. • Maintaining privacy
	Secondary thinking errors	
	Minimizing/mislabeling	<ul style="list-style-type: none"> • Being manipulative • Lack of self-confidence
	Assuming the worst	<ul style="list-style-type: none"> • Labeling others on the basis of first expression. • Thoughts about physically abusing others on the basis of personal dislikes. • Self-mutilation behavior as an inability to achieve desirable results. • Being narrow-minded and keeping grudges for others. • Assuming ill about others when they do not meet your expectations. • Easily angered by bad labels from others
		Blaming others
		<ul style="list-style-type: none"> • Scapegoating • Self-harming • Manipulation
Evaluating and relabeling anger and aggression	Anger's advantages	<ul style="list-style-type: none"> • High chances of friendship • People will fear you. • Catharsis • Personal safety

	Anger's disadvantages	<ul style="list-style-type: none"> Physical harm Bad Label Scolding by authorities
	Strings used by clown	<ul style="list-style-type: none"> Name-calling Fun making on the basis of physical appearance and skin color Teasing others by mocking them for failed relationships Discouraging personal choices
	Triggers used by you to make other distressed	<ul style="list-style-type: none"> bad name calling stealing others' favorite stuff Aggravating fights
Anatomy of anger	Activating events (triggers)	<ul style="list-style-type: none"> Teased by others without any reason Physical abuse by others Verbal abuse/misbehavior by others
		<ul style="list-style-type: none"> Stealing/snatching of my belongings. Manipulation on others' behalf Deprivation of education/basic rights
	Your expression of anger	<ul style="list-style-type: none"> Raid breath Rapid heartbeat Sweating Clenching fists Teeth grinding Physical aggression Recitation of verses Cold and hot flashes Crying
	Self talk anger reducers	
	Before	Rationalizing the situation of hitting others <ul style="list-style-type: none"> is not good. is a bad behavior brings problems can take life.
	During	<ul style="list-style-type: none"> Planning to avoid it for future prospects. Planning to seek revenge and teach them a lesson with the help of my friends
	After	<ul style="list-style-type: none"> Seek forgiveness Self-pity Seeking revenge Keeping grudges in heart
	Ali's thinking error	
	Think errors in Ali's thinking	<ul style="list-style-type: none"> Stubbornness. Lack of self-control. Influence of Satan/Evil. Seeking revenge

		<ul style="list-style-type: none"> Lack of empathy
	Your advices to Ali	<ul style="list-style-type: none"> Say sorry Talk nicely Have control over your self Give time to your father for wish fulfillment.
Reversing	Your behaviors that serve as triggers	<ul style="list-style-type: none"> Stubbornness Stealing Physical aggression My Arguments Drug/cigarette addiction
Victim and victimizers		
	Victim's characteristics	<ul style="list-style-type: none"> Being in a state of continuous fear Excessive Anxiety Being worried Crying Fear of being poor Chances to experience heart attack
	Victimizer's characteristics	<ul style="list-style-type: none"> Ruthless brutal Cause physical and emotional pain Lack empathy
	Who are you? a victim or a victimizer	<ul style="list-style-type: none"> Both, I act accordingly I take revenge. I have been physically abused by older boys. I act as a victimizer to younger boys. I consider myself a victim but manage to deal with abusers. My stepmother used to beat me often.

DISCUSSION

The study was aimed at translating the anger management/thinking error correction section of the EQUIP program into Urdu and adapting it according to age, education, and cultural appropriateness. The accuracy of the translated material was assessed through the implementation of specific curriculum on the sample of 10 juveniles and runaway adolescents. This study intended to observe the change in aggression and cognitive distortion levels before and after the implementation of the treatment plan through a quasi-experimental research design. The EQUIP approach encourages the participants to be a part of mutual help meetings before the implementation of activities related to anger management and thinking errors correction.

The underlying reasons behind these meetings lie in the understanding of participants' capability to think and act responsibly towards each other in an effort to develop a pro-social environment that will help in the identification of problems and thinking errors by other members of the group and in the effort to redirect emotions. Mutual help meetings are comprised of lectures about identification and recognition of general and specific problems, primary-level and secondary-level thinking errors, life story meetings, and ground rules prescribed for attending these meetings (Fang & Mushtaq, 2024). Once the motivated peer culture is established, equipment meetings based on the specific curriculum of activities related to anger management and thinking error correction were started properly.

The curriculum related to mutual help meetings and equipment meetings was translated into Urdu by keeping in mind the mental and academic levels of delinquents. The EQUIP implementation guide defines separate guidelines for the equipper (a person who is responsible for performing activities with delinquents) and participants. Most of

the sessions are followed by a specific form, which participants have to fill out after attending lectures and practicing activities on specific concepts. Only the participant's handouts were translated into Urdu. The equipper guidelines were kept untouched because these guidelines were to be followed by the researcher and trainer. The translated material was then evaluated by two experts related to the field of psychology with expertise in translation. Through lectures on related concepts, participants filled the forms as per their own personal experiences and understanding. The process of adaptation involved a proper consideration of cultural and age-appropriateness, e.g., in the activity related to Grey's thinking errors, the concept of girlfriend was removed and the scenario was replaced with aggressive behavior towards the father. The probing questions in the anatomy of anger were very difficult to answer according to the delinquent's education level. The AMBC model was explained in a simpler form. Instead of drawing a leading relationship between activity and outcome (do B, then C, and come back and do M as per the original form presented in the form), participants were encouraged to explain their bodies' reaction during the state of anger, the connection between body and mind, and thought processes during the state of anger. For better understanding of the mind and body connection, participants were encouraged to recall an incident where they found themselves in the extreme state of anger.

The concept of clown in ring (anger management s1) was presented graphically on a whiteboard for better understanding. In the individual performance plan, the response rate of the question related to social behavioral problems was changed from a rating scale (responding to severity level from 1 to 4) to dichotomous responding (Yes or No). Respondents found difficulty in understanding the link between assigning a specific number and the severity of problematic behaviors.

The question mentioned in the thinking errors (participant handout), e.g., "Are behavior and thinking connected?" Explain, and parts of mutual help meetings were removed on the basis of difficulty level. Not a single participant answered these questions. But Urdu translated versions kept these translations with the intention to be used for educated samples (antisocial youth in school settings). The section entitled "Thinking ahead of time (consequences) of anger management/thinking error" was explained in its simplest form by giving daily life anger encounters. The categorization associated with consequences as constructive versus destructive and general versus feeling consequences was removed from the translation for the present sample because of the complexity of the concepts (Sarfraz et al., 2022). It was important to make them understand what an individual can earn by engaging in a delinquent activity, rather than focusing on what is general and what is specific.

Results of the Wilcoxon Signed-Rank Test revealed significant lower scores on post-level measures along reactive aggression, self-centeredness, blaming others, assuming the worst, and HIT total scores, suggesting a visible improvement in juveniles' behavior in the form of lower levels of aggression and cognitive distortions after the introduction of the intervention plan. These results are consistent with previous studies. Results of a study by Brugman & Bink (2011) revealed a reduction in post-test scores on cognitive distortion (egocentric bias, blaming others, and minimizing/mislabeling). However, no differences were found on chances of recidivism. Similarly, results of a quasi-experimental study by Nas et al. (2005) revealed a significant reduction in cognitive distortion levels of juvenile delinquents with no significant change in moral judgment, social information processing, and social skill development.

On the other hand, in an effort to check the effectiveness of the EQUIP program, a study by Helmond et al. (2012) yielded different results on the sample of 115 juvenile delinquents incarcerated in different correctional institutes. Results endorsed the effectiveness of the program in the decline in assessment of moral values and enhanced social skills but did not show positive results in an effort to lower the level of cognitive bias and enhancement of moral judgment. Leeman et al. (1993) conducted a study with the initial version of the EQUIP program to assess its effectiveness among delinquents imprisoned in correctional centers with medium-level security. Analysis made on staff reports exposed a positive change in the behavior of delinquents, who were easily controlled after the implementation of this program. As for the recidivism, a follow-up study revealed that only 15% of delinquents from the EQUIP group were found in cases of reoffending in comparison to 29.7% of delinquents from the control group. However, the findings of a cohort (twelve months after release) revealed that the recidivism incident rate for the EQUIP group was found to be consistent but was one-third of the control group's (40.5%).

Limitations and Suggestions

The EQUIP program is comprised of three sections: anger management/thinking error correction, social skill development, and social decision-making. The present study is based on the translation and adaptation of only one section (anger management/thinking error correction) based on the results revealed by the qualitative study (Haq et al., 2023) conducted on the related sample. The other two sections are equally important to be considered for translation and adaptation to experience the overall change in the behavior of antisocial youth (Sawangchai et al., 2022). The intervention study is based on a pretest-posttest within-subjects quasi-experimental research design. The researcher examined the same individuals on pre- and post-test levels to assess the change before and after the implementation of the treatment plan. The study recommends a follow-up with a control group to examine the change over time.

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