

GROUP GAME-BASED PHYSICAL ACTIVITY EFFECTS ON POSITIVE AFFECT AND NEGATIVE AFFECT OF MALE ADOLESCENT PRISONERS

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Abstract: Group Game-Based Physical Activity Effects on Positive and Negative Affect of Male Adolescent Prisoners. This report arises from a larger study that aims to investigate the mental health of adolescent prisoners. The Indonesian juvenile justice system locks up more than half of young offenders (Pratiwi & Faridah, 2019). Questions have been rise about the mental well-being of the adolescent. This study, with a sample of 28 male prisoners age between 14 to 18 years old, explored the effects of physical activity using group-based games on mental health of adolescent prisoners. These participants showed many behavioral and emotional problems before entering and during their time in prison, such as: family problem, drug abuse, problems with peers and officers. The participants had three sessions of game activities in one week. The pretest-posttest design was used to collect the data. This experimental study measured with positive affect and negative affect scale (PANAS) by Watson, Clark, and Carey (1988). Results show that group games-based physical activity can increase positive affect $M= 4.750$ (Sig = 0.001) from pretest to posttest, and decrease negative affect $M= 2.968$ (Sig = 0.003) from pretest to posttest. This study aims to show that that group games-based physical activity can make their lives inside the prison would be meaningful.

Keywords: *adolescent prisoner, positive affect, negative affect, Group Game-Based physical activity*

INTRODUCTION

Adolescent is a phases of human development. This phase begins around 10 to 12 years of age and ending at 18 to 21 years of age (King, 2011). This stage of development begins with puberty and ends when individuals make the transition into

adult roles, individuals become interested in sex and biologically capable of having children (Steinberg, 2017). The changes in adolescence comprises of biological, cognitive, as well as sosio-emotional changes (Santrock, 2011). During this



transitional stage, a time of major testing, adolescents try to determine what is unique about them. They attempt to discover who they are, what their strengths are, and what kinds of roles are best suited them for the rest of their lives (Feldman, 2015). It is also time to develop peer relationship (Swenson, Snordstrom, & Hiester, 2008), which could lead to identity crisis (Kalat, 2012).

This developmental phase usually encourage adolescents to try new things which can result in negative behavior, such as alcohol use and an increased trajectory toward heavy drinking (Biehl, Natsuaki, & Ge, 2007; Faden, Ruffin, Newes-Adeyi, & Chen, 2010), trying cigarettes (Westling, Andrews, Hampson, & Peterson, 2008), or violent and non-violent delinquent behavior (Cota-Robles, Neiss, & Rowe, 2002). In response to committing these impulsive offenses, a number of adolescents have to spend some times in prison. In Indonesia, there are more than 2,000 cases of juvenile crime (Zuraya, 2017).

In 2015, The General Director of Social Rehabilitation explained that every year there are more than 4,000 cases of violations of law carried out by adolescents aged 16-18 years. Eighty three percent of the teenagers who were arrested were imprisoned after trial (Pratiwi & Faridah, 2019).

Incarceration is the consequences that some of the juvenile offenders would pay for their act. The aims of the correctional facility are to make the offenders realize their mistakes and not to commit future crime, to assist offenders in the process of reintegration into the community (UU No 12 Tahun 1995). Living in a prison can challenged adolescent mental well-being. Some juvenile offenders experience inability to interact with others (Steiner & Meade, 2016) and unresolved past life trauma that make them always think of their mistakes (Evans, Ehlers, Mezey, & Clark, 2007). They also experience insecurity about future prospect because the lack of employment history, money problem, and difficulty in communicating with family (Garland, Wodahl, & Mayfield, 2011).

These mental problems, according to the researchers, must be a concern so that adolescence while in prison do not experience anxiety and other emotional disturbances, so that after serving a period of detention these teenagers still have a healthy mental state so that what is the goal of the prison is achieved. Anxiety is one of emotional disturbance. Individuals have a different reaction in dealing with a condition. One of classification personality based on the type of emotions are positive affect and negative affect (Khrone, 2003).

Watson and Clark (1984) equate the concept of affect with emotion. Furthermore Clark, Watson, and Mineka (1994) explain that the temperament represented by the construct of positive affect and negative affect can be a predictor of anxiety and other psychiatric disorders.

Durnescu (2018) argues that the prisoners need something special to help them complete the development task in the prison to avoid inconvenience. During the developmental stage, adolescents become less dependent with family and friendship with peers plays the most important role in developing their social skills (Santrock, 2011). However, inside the prison, interaction with other inmates often result in misunderstanding that leads to further abuse or bullying by other inmates, blackmail, and violence that add to their punishment (Utami & Asih, 2016). This also contributes to the poor mental health of the juvenile inmates.

Many activities are designed to support of adolescent prisoners. A study conducted by Hilman dan Indrawati (2017) shows that the rehabilitation program established by prison staff, such as traditional game, might be effective in improving adolescent prisoners mental's health. Traditional game has several benefits. Besides giving the participants a chance to having fun, it also

improves one's agility and social skills (Supriyono, 2018).

Playing games that encourage physical activity is expected to reduce distress in adolescent prisoners and to improve their interaction with other inmates.

METHODE

The researchers used experimental study with pretest-posttest group design for this study. The study was carried out in the prison by conducting outdoor activities. There were 28 male teenagers (age range 14-18 years old) participating in this study. These participants were sentenced for various crimes such as: drugs abuse, sexual assault, and thievery.

Positive and negative affect was measured using modiflicated Positive and Negative Affect Scale (PANAS) by Watson, Clark, & Carey (1988). The PANAS consists of 10 positive affect terms and 10 negative affect terms..

The intervention was preceed by two bridging activities: building rapport and interviewing personal information. The process of building rapport was conducted in three sessions. The interview was designed to seek qualitative information about each participants, such as personal information: name, date of birth, age, number of siblings, educational level,

parenting experience from parents, parental history of divorce, family financial status, history of committed crimes, and the length of sentence, and their experience in prison: activities inside the prison, problems with people inside the prison, personal emotional problem, things liked and disliked inside the prison.

This study was organized in three sessions in one week. Each session took maximum two hours. At the beginning, the participants were informed about this study. With their agreement, participants joined the activities on this study. Before the intervention was conducted, participants filled in the PANAS to get the baseline data about their positive and negative affect. Participants again filled the PANAS after completing three sessions of intervention. The posttest was given one day after the last intervention.

The researchers divided participants into four groups to carry group games. There were four games played in this experiment. The first game, *kejar-kejaran* (running after) is an individual game in which one person became a person in duty to catch another participant. The person in duty may choose anyone to run after. The targeted person has to escape from being touched by the person in duty. The person on duty will be replaced by another participant after touching any part of body of another

participant. This cycle is repeated and the loser is the one who becomes the person in duty most frequently.

The second game is *Jangan Sentuh Tali* (Don't Touch The Rope). This game involves two groups. One group tries to avoid the ropes and another distracts this group. One participant should pass through a simple labyrinth made of rope. This participant should not touch the rope to win the game. The participant's eyes are closed with a scarf and his group peers give him instruction to get to the labyrinth, such as turn left, go right, go ahead, stop, etc. Other group distracts this participant by making noise or mentioning wrong direction. The groups with participant that can reach the target without touching the ropes become the winner.

The third game that was played in this study is *gigit ekor ular* (bite the snake tail). In this group game, each group makes a line by standing behind another participant and hold on to the one in front of. The line should not be broken during the game. The "snake" with separated line is the loser. The front participant is considered as the snake head and the person at the back is the tail. The snake head should stab the balloon that is placed on the snake tail with a needle. The winner is the snake head who broke the balloon first.

The last game that was performed is *isjaring laba-laba* (spider net). The researchers provided a net made of rope like a spider net. Each group had to send each group member from one side to another side through the net. The participant's body could not touch the rope. All group members should make ideas to help their friend pass through the net. The faster group became the winner.

RESULT AND DISCUSSION

Result

Table 1. Data Distribution

Positive Affect		
Phase	Shapiro-Wilk	Sig
Pretest	0.984	0.928
Posttest	0.952	0.218
Negative Affect		
Phase	Shapiro-Wilk	Sig
Pretest	0.967	0.510
Posttest	0.962	0.397

The table above informs that Shapiro-Wilk of positive affect's score is 0.984 with 0.928 (>0.05) score for significance value. It indicates that the data distribution during the pretest phase was normally distributed. And the data distribution in posttest phase was also normal as the Shapiro-Wilk was 0.952 and significance values 0.218 (>0.05). And negative affect's score in table is 0.967 with 0.510 (>0.05) score for significance value. It indicates that the data distribution during the pretest phase was normally distributed. And the data distribution in posttest phase was also normal as the

Shapiro-Wilk was 0.967 and significance values 0.397 (>0.05).

Table 2. Difference Test

Positive Affect		
Phase	Mean	Deviation Standard
Pretest	31.68	7.98
Posttest	36.43	6.68
Negative Affect		
Phase	Mean	Deviation Standard
Pretest	32.93	3.58
Posttest	29.96	4.84

The normal data distribution is continued to difference test (see table 2). The change of mean score from 31.68 to 36.43 explains the positive affect of adolescents increases in posttest better than the pretest after intervention of group-based physical activities. And The change of mean score from 32.93 to 29.96 explains the negative affect of adolescents decreases in posttest after intervention of group-based physical activities.

Table 3. Correlation of Positive Affect and Negative Affect in Pretest and Posttest

Positive Affect		
	Correlation	Sig
Pretest-posttest	0.565	0.002
Negative Affect		
	Correlation	Sig
Pretest-posttest	0.396	0.037

The table above shows the correlation between pretest and posttest data. The

correlation score is 0.565 (<0.05) that indicates that there is a correlation between positive affect before and after intervention of group based physical activity. The correlation score is 0.396 (<0.05) that indicates that there is a correlation between negative affect before and after intervention of group based physical activity.

Table 4. Paired Difference

Positive Affect				
Pretest- Posttest	Mean	Deviation Standard	T- score	Sig.
	-4.750	6.93	-3.626	0.001
Negative Affect				
Pretest- Posttest	Mean	Deviation Standard	T- score	Sig.
	2.968	4.757	3.297	0.003

The table above shows the mean of positive affect is 4.750 and the mean of negative affect is 2.968.

Discussion

There are some developmental tasks that should be completed during every developmental stage. Human suffers from problems that intervene his/her developmental tasks. This also happens to adolescent prisoners. It is important for adolescents in hostage to manage their affect in order to avoid misery and distress.

Every human has inner affect that consists of positive affect and negative affect. Watson, Clark, and Carey (1988) state that positive affect (PA) is pleasant emotions and

negative affect (NA) is unpleasant emotions. Furthermore, Tomkins (Plutchik, 1980) argues that positive affect is a tendency to feel positive, a force to find good mood and avoid unpleasant feeling. Negative affect is defined as a tendency to have a negative feeling that linked to anxiety and depression.

This study also agrees with the experts' argument stating that human affect is bipolar (Watson, et al., 1988; Costa & McCrae, 2008). Bipolarity in affect implies that positive affect and negative affect cannot emerge at the same time and intensity. This study shows that, a rise in the mean of positive affect by 4.750 is followed by a fall of the mean of negative affect by 2.968.

Individuals with high positive affect have high energy, good concentration, and comfortable meanwhile those with low positive affect shows sorrow and distress (Berry & Hansen, 1996). The inmate with high negative affect usually describe him/herself as guilty, fearful, and panicky in comparison to those with low negative affect (Berry & Hansen, 1996). According to Barlow, Durand, and Hofmann (2017) negative affect such as afraid, nervous, and jittery can disturb a person physiology, cognitive and behavior.

Positive affect (PA) and negative affect (NA) constitute the emotional dimension of subjective well-being and are characterized

by the frequency and intensity that subjects are prone to feel positive and negative emotions such as joy, excitement, anger, and sadness (Zanon, Bastianello, Pacico, & Hutz, 2013).

The games that were played in this experiment, namely *kejar-kejaran*, *jangan sentuh tali*, *gigit ekor ular*, *jaring laba-laba*, required physical activity. All parts of body, such as hand, leg, eyes, ears, and brain also partake in these games. When a person engages in physical activity, his psychological ability, emotional ability, and physical health also take part (Li, Lu, & Wang, 2009). Performing physical activity or sport not only gives positive effect on physical health but also on mental health, for instance emotional intelligence that play an important role in relationship skill, emotional quotient, self-motivating ability, and emotion regulation (Riyanto, Mudian, 2019)

Physical activity can reduce stress due to the secretion of “feel good” hormone, endorphin, which generate sense of tranquility, release tension, and reduce pain. Endorphin produced during physical activity can replace stress hormone, cortisol, and stabilize emotion (Stevens, R. E. et al., 2013). According to Goleman (2016) physical activity is associated with mental-emotional wellbeing because physical

activity can provoke nervous system that controls the emotion, namely limbic system. Furthermore the experimental games are group games. For instance, in *gigit ekor ular*, the head is responsible for keeping the tail safety. Communication, instruction, and mutual trust play an important part in this game. Likewise in *jangan sentuh tali*, the participant with covered eyes entrust his action to his group peers. The group games improve mutual trust among inmates. According to Pavot dan Diener (Linley, & Joseph, 2004) one of the influencing factors in mental health is social relationship. Social support is also one of the elements that help someone to reduce stress and overcome adverse life event (Yasin & Dzulkifli, 2010). Inside the prison, inmates receive support from each other so that with openness and mutual trust among inmates, their lives inside the prison would be meaningful.

CONCLUSION

Some adolescent prisoners suffer from various problems during their time. This phenomenon is caused by restricted activity and isolation that they experience. The prisoners' ability to manage their affect plays an important role in dealing with problems rise inside prison.

Literature analysis suggests that a person with high positive affect has a higher energy

and better concentration and convenience while negative affect brings misery and distress. Data analysis shows that physical group activity has positive impact on the quality of life, improve social connection and

increase positive emotion. These benefits are several factors that can improve subjective well-being. The good level of subjective well-being shows good state of mental health.

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