

Reducing Aggressive Behavior of Adolescent with Using the Aggression Replacement Training

Yulvi Hardoni^{1*}, Meri Neherta², Rika Sarfika³

¹Nursing Post Graduate Program, Faculty of Nursing, Andalas University

²Pediatric Nursing Department, Faculty of Nursing, Andalas University

³Psychiatric Nursing Department, Faculty of Nursing, Andalas University

*Email korespondensi: yulvihardoni74@gmail.com

Submitted :19-09-2019, Reviewed:03-10-2019, Accepted:06-10-2019

DOI: <http://doi.org/10.22216/jen.v4i3.4587>

ABSTRACT

Adolescent is a transition period from childhood, therefore adolescents will show unique behaviour and experience various difficulties in managing their emotions so that one of them will lead to aggressive behaviour. Various impacts can occur due to aggressive behaviour such as decreased learning achievement, bad social relations, anxiety, depression, and suicide. Therefore it is needed a handling effort, one of which is aggression replacement training. The goals of this study were to identify aggression replacement training can reduce aggressive behaviour in adolescent. The design of this research is quasi experiment design and research design of one group pre-test post-test and sampling technique using purposive sampling. The population in this study were adolescent in vocational high school "X" in Padang city with a sample of 43 adolescents. Data were analyzed by using paired T-Test with significant value $\alpha=0.05$. The results showed before giving aggression replacement training the average aggressive behaviour of adolescents is 86.86 and after the average is 76.93. So it shows there is a significant difference in aggressive behaviour between before and after given of aggression replacement training to adolescent. So that we hopes nurses can reduce aggressive behaviour for adolescent, one of them is to apply aggression replacement training.

Keywords: Adolescent; Aggression; Depression

INTRODUCTION

Adolescent is a transition period that experiences significant physical and cognitive changes (Santrock, 2011), social independence and forming identity (WHO, 2015). The adolescents not only achieve developmental tasks but also have to overcome various stressors (Shelton, Kesten, Zhang, & Trestman, 2011), but adolescents have difficulties in managing their emotions and behaviour (Blakemore & Mills, 2014; Holder & Blaustein, 2014), adolescents experiencing conflict with parents (Apriyeni, Machmud, & Sarfika, 2019), adolescents

have behaviour of smoking (Alamsyah & Nopianto, 2017), besides that adolescents are also at risk of aggressive behaviour (Kusumaryani, 2017). Aggressive behaviour is a threatening behaviour, and it is carried out against objects or people (Townsend, 2015), verbal or physical behaviour that can endanger humans and cause difficulties, damage, pain, or damage property (Marcus, 2017). Meanwhile, according to Buss-Perry that aggressive behaviour consists of four types, namely the behaviour of physical aggression, verbal, anger and hostility (Gallagher & Ashford, 2016).

Some studies have been conducted related to aggressive behaviour. For example, in Nigeria, 20.8% of adolescents experienced physical aggressive behaviour and 48.3% of the adolescents experienced verbal aggressive behaviour (Onukwufur, 2013). Then, in 2015 as many as 22.6% of adolescents did physical battles in America (Laura, 2016). In addition, in 2016 WHO reported that an estimated of 200,000 aggressive behaviour occurred in adolescents each year in the world; aggressive behaviour also became the fourth cause of death in adolescent groups (WHO, 2016). Whereas in China, adolescents possessed 4.31 times the tendency to experience aggressive behaviour (Zhang et al., 2018). In Indonesia, based on a study conducted by Fasya & Friska Amelia, (2017), 11.9% of adolescents had aggressive behaviour in a high category and 75% of adolescents had moderate aggressive behaviour. Then, a study conducted by Sentana (2017) found 2.96% of adolescents with high aggressiveness and 81.48% of adolescents with moderate aggressiveness.

One of aggressive behaviour therapy is aggression replacement training, which is an intervention program based on cognitive behaviour theory to develop adequate social skills and ethical reasoning, anger management skills and control aggressive behaviour (Wongtongkam et al., 2014; Hornsveld et al., 2015; Smeijers, 2018). The aggression replacement training according to Goldstein (1987) consists of three components is social skills training (Skill streaming), anger control training and moral reasoning training (Glick, 1987; Goldstein, 2004).

The difference between this study and other studies is that the researcher modified the aggression replacement training into 7 sessions with 60 to 90 minutes for each sessions. In the previous the study, aggression replacement training was 18 meeting sessions (Hornsveld et al., 2015) and

12 sessions for 12 weeks (Smeijers, 2018). The implementation of aggression replacement training this study without reducing the basic components in the implementation of aggression replacement training, such as social skills training, anger control training and moral reasoning training (Glick, 1987; Goldstein, 2004).

The first component is social skills training which is a behavioural component of aggression replacement training by teaching effective social skills. The second component is anger control training, which is an emotional component of aggression replacement training by teaching, defining and interpreting signs of psychological stimulation and self-control techniques. And the third component is moral reasoning training, which is a cognitive component of aggression replacement training, which aims to increase the level of moral maturity by changing cognitive distortion and forming positive thoughts (Glick, 1987; Goldstein, 2004).

In connection with the existence of phenomenon of aggressive behaviour among adolescents and the impact is very broad, the researcher has an interest to identify aggression replacement training can reduce aggressive behaviour in adolescents in vocational high school "X" at Padang city. And it can be useful in the development of aggression replacement training as one of the competencies of nurse for mental nursing specialist as part of efforts to overcome adolescents who experience aggressive behaviour.

METHODS

This study was quantitative research to using a quasy experimental research design with a research design of one group pre-test post-test and sampling technique using purposive sampling. The population in this study were adolescents in vocational high

school “X” at Padang city with a sample of 43 adolescents.

The procedure for selecting a sample was done through screening using the Brief aggression questionnaire (Bryant & Smith, 2001; McKay, Perry, & Harvey, 2016). The minimum sample size and representative based on the design of this study was using the sample size formula for continuous variables with the hypothesis test of paired average differences (Lemeshow, Jr, Klar, & Lwanga, 1990).

The aggressive behaviour variable was measured using the Buss-Perry Aggression Questionnaire (Buss & Perry, 1992), instrument translated in the Indonesian language. The researchers tested the validity and reliability of the questionnaire to 60 students of vocational high school in Padang city, and tested for validity that was the value of $r \text{ count} \geq r \text{ table}$ (0.264) for all statement items (29 items) and reliability has obtained a Cronbach’s Alpha of 0.872. The data collection was performed by the researcher for before and after given aggression replacement training.

This study of aggression replacement training interventions was given to respondents conducted by the researchers themselves to four intervention groups. The implementation of the aggression replacement training was modified was done for seven session duration of 60 to 90 minutes for each session with five weeks in class in. The aggression replacement training used modelling, role-playing, performance feedback transfer training, discussion, and homework methods. The media used including module, worksheet, card games, and stationary.

Based on the normality and homogeneity test of research variable data that have been carried out that aggressive behaviour

adolescent variable data is normally distributed (Shapiro-Wilk test of significance value of 0.884), homogeneous (Levene test of significance value of 0.510). Data were analyzed using paired t-test to know the difference of aggressive behaviour mean value before and after intervention with significance level of 95% ($\alpha = 0.05$).

This research has been approved by the research ethics committee, by the Research Ethics Committee of the Medical Faculty of Andalas University with a certificate passing the Ethical Clearance number 088/KEP/FK/2019. All respondents have obtained an explanation of the research objectives and benefits, explanations were given orally and in writing. It was also stated that the participants have obtained the appropriate informed consent in this study.

RESULT AND DISCUSSION

The result of analysis get the average age of all respondents is 16.28 with standard deviation 0.630 age minimum is 15 years and maximum 18 years. The results showed that respondents of male sex 21 adolescents and female respondents as many as 22 adolescents.

Table 1 shows that the mean differences in aggressive behavior of the adolescents before and after aggression replacement training were given 88.86 and 76.93. Standard deviation of aggressive behavior before and after treatment are 9.508 and 11.094 with of p-value = 0.000.

As for the aspect of aggressive behaviour that had the highest mean difference before and after being given intervention was physical aggression with a p-value 0.000. Also, verbal aggression had the lowest mean difference before and after being given intervention, it was with p-value 0.000.

Tabel 1. Differences of aggressive behavior before and after intervention aggression replacement training were given (n=43)

Variable	Mean	SD	SE	P value
Aggressive behavior				
Before intervention	88.86	9.508	1.450	0.000
After intervention	76.93	11.094	1.692	
Physical				
Before intervention	28.19	3.587	0.547	0.000
After intervention	23.81	4.711	0.566	
Verbal				
Before intervention	14.49	2.548	0.389	0.000
After intervention	13.02	2.121	0.323	
Anger				
Before intervention	20.88	4.436	0.676	0.000
After intervention	17.91	4.592	0.700	
Hostility				
Before intervention	25.30	4.448	0.678	0.000
After intervention	22.19	5.843	0.836	

Based on the instrument to measure the aggressive behavior of adolescents in this study that is using the Buss-Perry aggression questionnaire from Buss & Perry (1992), that aggressive behaviour consists of four aspects or types, namely the behaviour of physical aggression, verbal, anger and hostility (Gallagher & Ashford, 2016).

The first aspect was physical aggression and aspect that has the highest. The average decrease in physical aggression of before intervention was 28.19 with a standard deviation of 3.587. Meanwhile, after intervention the average is 23.81 with a standard deviation of 4.711. Based on the results of the study, there was a significant difference physical aggression of between before and after aggression replacement training with p-values 0.000. The difference average difference before and after given intervention was in line with the research in Iran in which there was a change in physical aggression (Naser, 2014), and research in India in which there was a decrease in the level of physical aggression (Sharma & Sangwan, 2016). This could happen because

in aggression replacement training, namely anger control training had the goal of teaching someone to control and manage behaviour better in dealing with anger. In this component, the individual will take steps; identifying the triggers of anger, identifying anger cues, using reminders, using anger reduction, and using self-evaluation (Goldstein, 2004).

The second aspect was verbal, based on the results of the analysis of verbal aggression in the average decrease of before intervention was 14.49 with a standard deviation of 2.548. Meanwhile, after intervention the average is 13.02 with a standard deviation of 2.121. Based on the results of the study, there was a significant difference verbal aggression of between before and after aggression replacement training. There are significant differences in aspects of verbal aggression before and after of intervention which was in line with Kopolov's research (Kopolov, 2014), a research in the Netherlands showed a significant decrease in aggression in general (Hornsveld et al., 2015). Also consistent with

the results of a systematic review study that aggression replacement training had a positive impact on self-control in adolescents (Brännström et al., 2016). While research in Turkey on adolescents also reduced verbal aggression (Kaya & Buzlu, 2016).

The third aspect was anger, based on the results of anger analysis in the average decrease of before a intervention was 14.49 with a standard deviation of 2.548. Meanwhile, after intervention the average is 13.02 with a standard deviation of 2.121. Based on the results of the study, there was a significant difference anger of between before and after aggression replacement training.

There were significant differences in anger dimensions before and after of intervention which was in line with the Kuposov research 2014 (Kuposov, 2014), a research in the Netherlands showed a significant decrease in anger (Hornsveld et al., 2015), Wongtongkam et al.(2014) research in Thailand. Also consistent with the results of a systematic review study that aggression replacement training has a positive impact on self-control in adolescents (Brännström et al., 2016). While research in Turkey on adolescents also reduced anger levels (Kaya & Buzlu, 2016). This could happen because in one of aggression replacement training component, anger control training, did the steps; identifying the triggers of anger, identifying anger cues, using reminders, using anger reduction, and using self-evaluation (Goldstein, 2004). As well as aggression replacement training, according to B. Glick & Goldstein (1987), one of its component was skilful streaming which was a behavioural component of aggression replacement training by teaching effective social skills.

The fourth aspect was hostility, from the results of hostility analysis in the average decrease of before a intervention was 25.30 with a standard deviation of 4.448.

Meanwhile, after intervention the average is 22.19 with a standard deviation of 5.843. Based on the results of the study, there was a significant difference hostility of between before and after aggression replacement training. The moral reasoning training component of aggression replacement training is promotes the development of sociomoral reasoning through social decision making meetings (Goldstein, 2004). It is designed to increase honesty, a sense of fairness and give individuals the opportunity to discuss about their response to a problem. Thus, it can increase the values of caring for others rights and help adolescent use interpersonal and anger management skills that are taught.

While for the average total aggressive behavior based on the results showed the average decrease in aggressive behavior of the adolescents before aggression replacement training was 88.86 with a standard deviation of 9.508. Meanwhile, after aggression replacement training the average aggressive behavior of the adolescents is 76.93 with a standard deviation of 11.904. Based on the results of the study, there was a significant difference between before and after aggression replacement training.

Among the groups whose receiving intervention, there were significant differences before and after of intervention because in this intervention the respondents got an explanation and guidance to do three forms of structured and continuous training in groups, and they did it independently outside the therapy class. The first form of training was social skills training which was component of behaviour by teaching effective social skills. The second form of training was anger control training which was an emotional component by teaching, interpreting signs of psychological stimulation, and self-control techniques. While the third form of training was a moral reasoning training which was a cognitive

component that aimed to increase the level of moral maturity by changing cognitive distortion and forming positive thoughts of respondents. By having continuous practice, respondents would get used to and behavior automatically.

There is a significant difference before and after of aggression replacement training that was in line with the research results obtained, there was a significant influence on positive changes in aggressive behaviour (Koposov, 2014), research in the Netherlands showed a significant decrease in physical aggression, anger, hostility and aggression in general (Hornsveld et al., 2015). It was also consistent with the results research that aggression replacement training had a positive impact on self-control, social skills and mental development in adolescents (Brännström, Kaunitz, Andershed, South, & Smedslund, 2016). Whereas research in Turkey on adolescents involved in criminal acts, namely after being carried out on aggression replacement training in the intervention group, it was obtained very significant results in decreasing levels of anger, increasing anger control, decreasing physical aggression, and reducing hostility (Kaya & Buzlu, 2016).

CONCLUSION

Intervention in the form of aggression replacement training is proven to decrease aggressive behaviour for adolescents in vocational high school. The results of this study can be applied by nurses for adolescents with aggressive behaviour through school mental health program (UKJS). To find out the effectiveness of aggression replacement training in the future, further research is needed related to factors that can influences.

ACKNOWLEDGEMENTS

The authors would like to thank for Badan Pengembangan dan Pemberdayaan Sumber

(488-495)

Daya Manusia Kesehatan of the Ministry of Health Indonesia which provided funding for the process of this research. And also thanks for Nursing Post Graduate Program Faculty of Nursing Andalas University, that has provided support in this research.

REFERENCES

- Alamsyah, A., & Nopianto. (2017). Determinan perilaku merokok pada remaja. *Jurnal Endurance: Kajian Ilmiah Problema Kesehatan*, 2 (February), 25–30. <https://doi.org/http://dx.doi.org/10.22216/jen.v2i1.1372>
- Apriyeni, E., Machmud, R., & Sarfika, R. (2019). Gambaran Konflik Antara Remaja dan Orang Tua. *Jurnal Endurance: Kajian Ilmiah Problema Kesehatan*, 4(1), 52–57. <https://doi.org/http://doi.org/10.22216/jen.v4i1.3008>
- Blakemore, S.-J., & Mills, K. L. (2014). Is Adolescence a Sensitive Period for Sociocultural Processing? *Annual Review of Psychology*. <https://doi.org/10.1146/annurev-psych-010213-115202>
- Brännström, L., Kaunitz, C., Andershed, A. K., South, S., & Smedslund, G. (2016). Aggression replacement training (ART) for reducing antisocial behavior in adolescents and adults: A systematic review. *Aggression and Violent Behavior*, 27, 30–41. <https://doi.org/10.1016/j.avb.2016.02.006>
- Bryant, F. B., & Smith, B. D. (2001). Refining the Architecture of Aggression: A Measurement Model for the Buss-Perry Aggression Questionnaire. *Journal of Research in Personality*, 35(2), 138–167. <https://doi.org/10.1006/jrpe.2000.2302>
- Buss, A. H., & Perry, M. (1992). The

- Aggression Questionnaire. *Journal of Personality and Social Psychology*, 63(3), 452–459. <https://doi.org/10.1037/0022-3514.63.3.452>
- Fasya, H., & Friska Amelia, A. (2017). Pengaruh Game Online Terhadap Tingkat Agresivitas Anak-anak dan Remaja di Kota Makassar (Studi Kasus di Kecamatan Tallo). *Hasanuddin Student Journal*, 1(2), 127–134.
- Gallagher, J. M., & Ashford, J. B. (2016). Buss–Perry Aggression Questionnaire: Testing Alternative Measurement Models With Assaultive Misdemeanor Offenders. *Criminal Justice and Behavior*, 43(11), 1639–1652. <https://doi.org/10.1177/0093854816643986>
- Glick, B. A. P. G. (1987). Aggression Replacement Training. *Journal of Counseling & Development*. <https://doi.org/10.1002/j.1556-6676.1987.tb00730.x>
- Glick, B., & Goldstein, A. P. (1987). *Aggression Replacement Training*. 65(March), 20–26.
- Goldstein, A. P. (2004). *New Perspectives On Aggression Replacement Training : Practice, Research, and Application*. The Atrium, Southern Gate, Chichester: John Wiley & Sons Ltd.
- Holder, M. K., & Blaustein, J. D. (2014). Frontiers in Neuroendocrinology Puberty and adolescence as a time of vulnerability to stressors that alter neurobehavioral processes. *Frontiers in Neuroendocrinology*, 35(1), 89–110. <https://doi.org/10.1016/j.yfrne.2013.10.004>
- Hornsveld, R. H. J., Kraaimaat, F. W., Muris, P., Zwets, A. J., & Kanter, T. (2015). Aggression Replacement Training for (488-495) Violent Young Men in a Forensic Psychiatric Outpatient Clinic. *Journal of Interpersonal Violence*, 30(18), 3174–3191. <https://doi.org/10.1177/0886260514555007>
- Kaya, F., & Buzlu, S. (2016). Effects of Aggression Replacement Training on Problem Solving, Anger and Aggressive Behaviour among Adolescents with Criminal Attempts in Turkey: A Quasi-Experimental Study. *Archives of Psychiatric Nursing*. <https://doi.org/10.1016/j.apnu.2016.07.001>
- Koposov, R. (2014). *Efficacy of Aggression Replacement Training among Children from North-West Russia*. 6(1), 14–24.
- Kusumaryani, M. (2017). *Ringkasan Studi : Prioritas kesehatan reproduksi remaja untuk menikmati bonus demografi*. Retrieved from www.ldfebui.org
- Laura, K. M. T. H. (2016). *Youth Risk Behavior Surveillance — United States, 2015*. <https://doi.org/http://dx.doi.org/10.15585/mmwr.ss6506a1>
- Lemeshow, S., Jr, D. W. H., Klar, J., & Lwanga, S. K. (1990). *Adequacy of Sample Size in Health Studies*. England: John Wiley & Sons Ltd.
- Marcus, R. F. (2017). The development of aggression and violence in adolescence. In *The Development of Aggression and Violence in Adolescence*. <https://doi.org/10.1057/978-1-137-54563-3>
- McKay, M. T., Perry, J. L., & Harvey, S. A. (2016). The factorial validity and reliability of three versions of the Aggression Questionnaire using Confirmatory Factor Analysis and Exploratory Structural Equation Modelling. *Personality and Individual*

- Differences, 90, 12–15. <https://doi.org/10.1016/j.paid.2015.10.028>
- Naser, et.al. (2014). Comparing the dimensions of aggression in adolescent athletes and non- athletes divorced families. *European Journal of Experimental Biology*, 4(1), 452–455.
- Onukwufur, J. (2013). Physical and Verbal Aggression Among Adolescent Secondary School in Rivers State of Nigeria. *International Journal of Education Learning and Development*, 1(2), 73–84. Retrieved from www.ea-journals.org
- Santrock, J. W. (2011). *Life-span development*. <https://doi.org/10.1037/002921>
- Sentana, et.al. (2017). Agresivitas dan kontrol diri pada remaja di Aceh. *Jurnal Sains Psikologi*, (November), 51–55.
- Sharma, D., & Sangwan, S. (2016). Physical, verbal and relational aggression among adolescents. *Advance Research Journal of Social Science*, 6(2), 160–164. <https://doi.org/10.15740/has/arjss/6.2/160-164>
- Shelton, D., Kesten, K., Zhang, W., & Trestman, R. (2011). Impact of a dialectic behavior therapy-corrections modified (DBT-CM) upon behaviorally challenged incarcerated male adolescents. *Journal of Child and Adolescent Psychiatric Nursing*. <https://doi.org/10.1111/j.1744-6171.2011.00275.x>
- Smeijers, D. (2018). *Aggression replacement training among aggressive forensic psychiatric outpatients*. <https://doi.org/10.13140/RG.2.2.12181.42728>
- Townsend, M. (2015). *Psychiatric Mental* (488-495)
- Health Nursing: Concepts of Care in Evidence-Based Practice* (Eighth Edi). Retrieved from www.fadavis.com
- WHO. (2015). *World health statistics 2015*. Retrieved from www.who.int
- WHO. (2016). *Youth Violence*. Retrieved from <http://www.who.int/en/news-room/fact-sheets/detail/youth-violence>
- Wongtongkam, N., Day, A., Ward, P. R., Winefield, A. H., Sciences, B., Avenue, P., & Wales, N. S. (2014). Assessing effectiveness of aggression replacement training at a Technical Collage in Thailand. *Social Behaviour and Personality*, 42(6), 1047–1056. <https://doi.org/http://dx.doi.org/10.2224/sbp.2014.42.6.1047>
- Zhang, Y., Wu, C., Yuan, S., Xiang, J., Hao, W., & Yu, Y. (2018). Association of aggression and suicide behaviors: A school-based sample of rural Chinese adolescents. *Journal of Affective Disorders*. <https://doi.org/10.1016/j.jad.2018.07.029>