

Meta-Analysis Study: Effectiveness of Play Therapy to Reduce Children's Aggressiveness

Esa Arsyiatul Alfath¹, Riki Zalki², Tutut Chusniyah³

^{1,3}Fakultas Psikologi, Universitas Negeri Malang, Indonesia

²Fakultas Psikologi, Universitas Surabaya, Indonesia

*tutut.chusniyah.fpsi@um.ac.id

ABSTRACT

Child aggression has become an increasing problem in recent years. Children who exhibit aggressive behavior tend to have difficulty controlling their emotions, get angry quickly and are often involved in conflicts with peers and family members. If not adequately addressed, this aggressiveness can negatively impact a child's social, emotional, and academic development, potentially leading to more severe behaviors later in life. One proven effective way to reduce aggressiveness in children is through play therapy. In this therapy, children can process emotions that are difficult to understand or express verbally, including anger and frustration, which often trigger aggressiveness. The study aims to see play therapy's effectiveness in reducing children's aggressiveness. The method used in this study is meta-analysis, in which researchers reviewed 14 selected journals based on predetermined characteristics. The analysis results show that play therapy has a significant effect size and effectively reduces aggressiveness in children. Further studies could explore the long-term impact of play therapy on children's aggressiveness across different age groups and cultural backgrounds, as well as its effectiveness when combined with other therapeutic interventions.

Keywords: Aggressiveness, Meta-analysis, Play Therapy

ABSTRAK

Agresivitas pada anak telah menjadi masalah yang semakin meningkat dalam beberapa tahun terakhir. Anak-anak yang menunjukkan perilaku agresif cenderung sulit mengendalikan emosi, mudah marah, dan sering terlibat dalam konflik, baik dengan teman sebaya maupun anggota keluarga. Jika tidak ditangani dengan baik, agresivitas ini dapat berdampak negatif pada perkembangan sosial, emosional, dan akademis anak, serta berpotensi mengarah pada perilaku yang lebih serius di kemudian hari. Salah satu cara yang terbukti efektif untuk menurunkan agresivitas pada anak adalah dengan terapi bermain. Dalam terapi ini, anak bisa memproses emosi yang sulit dipahami atau diungkapkan secara verbal, termasuk kemarahan dan frustrasi yang sering kali menjadi pemicu agresivitas. Penelitian bertujuan untuk melihat efektivitas terapi bermain dalam menurunkan agresivitas pada anak. Metode yang digunakan dalam penelitian ini adalah *Meta-analysis* dimana peneliti melakukan kajian terhadap 14 jurnal yang telah diseleksi

berdasarkan karakteristik yang telah ditentukan sebelumnya. Berdasarkan hasil analisis tersebut menunjukkan bahwa terapi bermain memiliki ukuran efek yang besar atau efektif dalam menurunkan agresivitas pada anak. Penelitian lebih lanjut dapat mengeksplorasi dampak jangka panjang dari terapi bermain terhadap agresivitas anak-anak di berbagai kelompok usia dan latar belakang budaya, serta keefektifannya ketika dikombinasikan dengan intervensi terapi lainnya.

Kata Kunci : Agresivitas, Meta-analisis, Terapi Bermain

ARTICLE INFO

Article history

Received 22-09-2024

Revised 13-04-2025

Accepted 16-05-2025

Introduction

Nowadays, a common obstacle during child development is emotional or behavioral problems that can interfere with home and school activities. Some of these problems include social issues, rule-breaking behavior, and aggressiveness problems (Teimourian et al., 2020a). Aggressive behaviors in children in the form of physical actions such as hitting, kicking, or pinching, as well as verbal behaviors such as yelling, abusive language, or threats are significant problems in their development (Marini et al., 2024). In their journal, Musslifah et al. (2021) also explained that aggressiveness is a form of behavior children often experience in their social environment. Problems related to aggressive behavior in children are essential in psychological and pedagogical formation.

Aggressive children will cause many problems for others and themselves (Parfilova, 2016). Forms of aggressiveness embedded in childhood can negatively impact their development into adulthood (Reef et al., 2011). Vergunst et al. (2019) explained that children who have high levels of aggressiveness would be at risk of future criminality. Komisi Perlindungan Anak Indonesia (KPAI) showed increased data on Indonesian children involved in criminal acts from 2011 to 2018, reaching 11,116 records.

Aggressiveness itself is defined as a behavior that can be manifested in various kinds of behavior; some have a mild impact such as pushing or mocking; moderate impacts such as hitting or kicking; and some have a severe impact by committing murder (Allen & Anderson, 2017). In line with that, the American Psychological Association (Kyes, 2015) It also explained that aggression is a form of behavior that has the aim of being able to hurt or act violently with others, either in physiological or psychological terms. Children with high levels of aggression will show obstacles to being able to adapt to their social environment and will cause problematic behavior during their development (Fitria & Meiyuntariningsih, 2019).

The aggressiveness that continues to appear at this stage of children's development if it does not receive appropriate treatment behavior will continue to be caused at the next stage of development (Iswinarti & Hidayah, 2020a). One form of intervention that can help reduce aggressiveness in children is providing play therapy (Kasmaei & Asghari, 2017b).

Play therapy is an interpersonal process through which therapists can help people reduce behavioral, emotional, or traumatic problems by facilitating coping (Porter et al., 2009). Play therapy itself is based on the theory that activities using play activities and materials (such as clay, water, blocks, dolls, etc.) can reflect children's emotional and fantasy lives, allow children to “play out” feelings and problems, and test new approaches in understanding the relationship between actions rather than words (Kyes, 2015). Play therapy also allows children to use their creativity and imagination to develop skills, agility, and emotional strength. Children can also learn about themselves and other things through play therapy, allowing them to interact with the world (Bita Sarpoulaki & Parisa Kolahi, 2016).

Play therapy has been proven effective in reducing aggressive behavior in children through various approaches and methods. A study conducted by Putri & Cahyanti (2021) showed that after participating in play therapy, there was a significant decrease in aggressive behavior in children. In addition, a study conducted by Pramudianti (2019) examining the effectiveness of origami-based play therapy in reducing aggressive behavior in early childhood through three intervention cycles showed that children experienced a significant decrease in aggressive behavior after attending origami play therapy sessions. In their study, Chotim et al. (2012) highlighted the use of play therapy with snakes and ladders games and puppet skits, showing that after the intervention sessions, children experienced a decrease in aggressive behaviors, such as hitting, mocking, and grabbing friends' toys. Another study by Pratiwi (2023) examined the effectiveness of play therapy with traditional game media such as cranklek and congklak lidi to improve self-control in children with aggressive behavior. Overall, various forms of play therapy, including the use of traditional games, role-playing, and creative activities such as origami, are effective in reducing aggressive behavior in children and, helping children express their emotions in healthy ways, improving self-control, and reducing the tendency to behave aggressively.

Research related to aggressiveness and play therapy itself has been widely studied before. Various previous studies have shown that play therapy is effective in reducing aggressiveness in children (Sarpoulaki & Kolahi, 2016; Ray et al., 2009; Yaseminejad & Solgi, 2018; Purwati & Qomariyah, 2019; Teimourian., 2020; Soltani & Farhadi, 2021). Although many studies

have been conducted previously regarding the effectiveness of play therapy in reducing aggressiveness in children, there are several research gaps that need to be considered, namely: First, various previous studies used different methods and subjects, so the results obtained vary and are difficult to compare directly. Second, some studies focus on one particular type of play therapy without considering various play therapy methods, so the study is less comprehensive. Third, the use of scales and methods of measuring aggressiveness in children in previous studies varied, making it difficult to draw consistent conclusions.

Conducting a meta-analysis can overcome and close these gaps because meta-analysis can identify common patterns from various studies, provide more decisive conclusions regarding the effectiveness of play therapy, integrate findings from various play therapy approaches so as to produce broader recommendations, find standards for the effectiveness of play therapy in reducing aggressiveness based on the measurement tools used, and meta-analysis studies can provide more substantial empirical evidence to educational practitioners, child psychologists, and policymakers to adopt play therapy as an effective intervention in reducing children's aggressiveness. Therefore, it is essential to conduct meta-analysis research to provide a more comprehensive understanding of the effectiveness of play therapy in lowering children's aggressiveness, and to help design more evidence-based interventions.

Method

This study uses the meta-analysis method. Meta-analysis itself is defined as a valid, objective, and scientific method to analyze and combine the results of different studies (Ahn & Kang, 2018). Shelby and Vaske (2008) It also explained that meta-analysis is a study result that is integrated using quantitative techniques that will produce an effect size in proving the effectiveness of the independent variable (IV) on the dependent variable (DV) (Post et al., 2020). This meta-analysis is used as an effort to understand the results of a study in a similar scope and to determine whether there is a stable effect size of the data as a whole (Borenstein et al., 2009).

This meta-analysis study was based on the guidelines described in PRISMA 2020 (Page et al., 2021) To look at the effect size of play therapy interventions on children's aggressiveness.

This study uses the help of Jamovi 2.3.18 software to conduct data analysis. Effect size categorization can be said to be large if it has a value of more than 0.8 (large effect size), categorization can be said to be moderate if it has a value above 0.5 (medium effect size), and

can be said to be low if it has a value below 0.2 (small effect size) (Bosco et al., 2015; Ellis, 2010; Fritz et al., 2012; Mark W. Lipsey, 2001).

There were 477 participants, who were obtained from combining 14 research journals suitable for researcher consideration. The research participants were divided into two groups: the control group, with 239 participants, and the experimental group, with 238 participants. The results of the research journals used in this meta-analysis were obtained by searching several database sources, including Science Direct, PubMed, and Google Scholar. The keywords used to search for research journals are “play therapy and aggression” or combined with the words “quasi-experimental” or “randomized controlled trial” to narrow the search and help researchers find the right journal for this research study. The following process is to select the results of the search using these keywords, which are adjusted to the inclusion and exclusion characteristics of this study, including: 1) the journals used were experimental journals published within the last ten years; 2) it was a study that tested play therapy on children's aggressiveness; 3) it had control and experimental groups; and 4) the research journal attached the mean and standard deviation values of the control and experimental groups. Journals that did not meet the criteria were screened out and not used in the study process. The researcher then created a literature search scheme described in Figure 1.

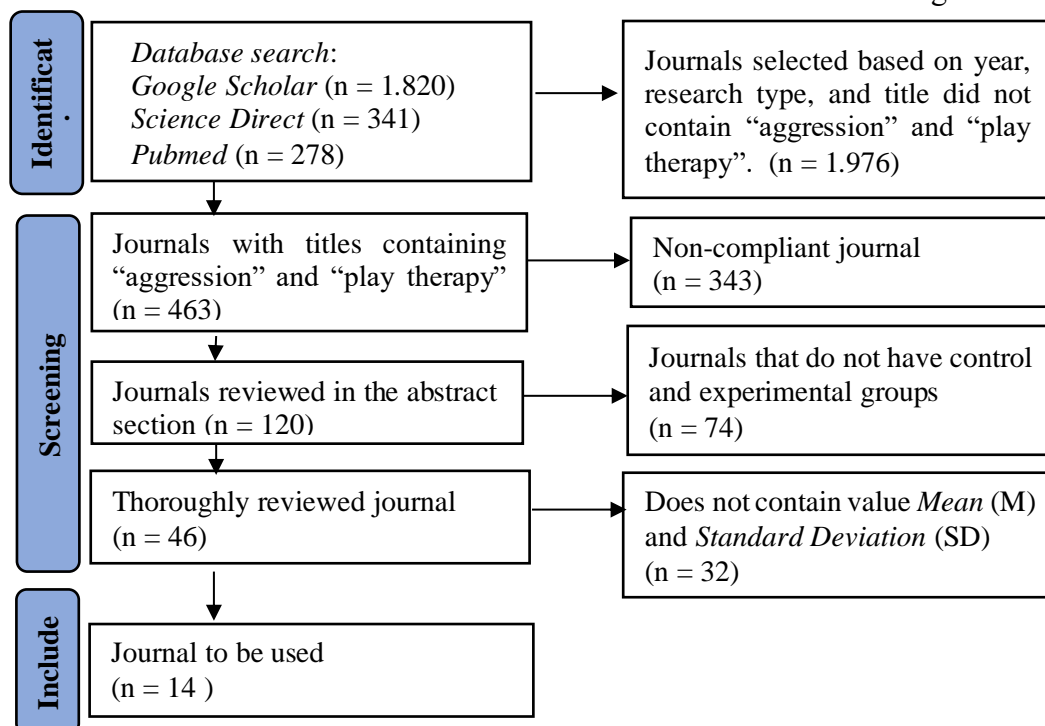


Figure 1. Schematic of Literature Search

After selecting the journals for use in this study, the next step was to start reviewing them, as detailed in Table 1.

Table 1
Recapitulation of Research Journals

Researcher and Year	Country of origin	Measurement	Method	g	95% CI
Yaseminejad & Solgi (2018)	Iran	Shahim aggression questionnaire	Using behavior cognition therapy, an intervention was conducted for two months, with eight sessions for the experimental group. After the posttest, a new intervention session was given to the control group.	-0,50	(-1,21) – (0,20)
Sarpoulaki & Kolahi (2016)	India	Shahim aggression questionnaire	Using the play therapy intervention, each group will have a 10-session directed play workshop for 2 hours each session.	0,01	(-0,46) – (0,48)
Purwati & Qomariyah (2019)	Indonesia	The teacher report form caregiver (CTRF)	Play therapy was carried out for 12 sessions with two meetings each week, and the session duration was 1 hour for the experimental group, while the control group did not receive any action.	4,12	(3,22) – (5,01)
Soltani and Farhadi (2021)	Iran	aggression scale of preschool children (parent form)	The experimental group was given a play therapy intervention based on the parent-child relationship, which was carried out for ten sessions for 2 hours each session (2 sessions per week), while the control group did not receive any action.	-1,70	(-2,73) – (-0,68)
Sarpoulaki and Kolahi (2016)	Iran	Shahim aggression questionnaire	Using play therapy intervention, as many as ten sessions were conducted, each session lasting 45 minutes for the experimental group, and the control group was not given intervention.	1,23	(0,00) – (2,47)
Jarareh, Mohammadi, Nader, and Moosavian (2016)	Iran	Aggression Questionnaire of Shahimin	Using group play therapy intervention, as many as ten sessions were conducted. Each session lasted 60 minutes for the experimental group, and the control group was not given any intervention.	0,12	(-0,59) – (0,84)

Researcher and Year	Country of origin	Measurement	Method	g	95% CI
Ray, Blanco, Sullivan, and Holliman (2009)	Amerika	Child Behavior Checklist and Teacher Report Form	Child-centered play Therapy was conducted over seven weeks with 14 sessions. There were two sessions per week, 30 minutes each for the control group, and the waitlist control group received no intervention during the study. After instrument administration, each control group child was placed in play therapy once weekly for the remainder of the school year.	10,83	(8,00) – (13,66)
Goudarzi, Meridian, and Roozbahani (2019)	Iran	Bass and Perry questionnaire (1992)	Using play therapy intervention, conducted as many as eight sessions, each lasting 1 hour 45 minutes, is carried out two times a week for the experimental group. In contrast, the control group does not receive the intervention.	1,63	(0,77) – (2,48)
Kasmaei and Asghari (2017)	Iran	Relational Aggression Questionnaire for Primary School	Play therapy by group approach was conducted in 10 90-minute sessions over seven weeks for the experimental group, with no intervention for the control group.	1,15	(0,20) – (2,10)
Iswinarti and Hidayah (2020)	Indonesia	The LA Aggression Scale for Elementary School	The experimental group was given a group play therapy intervention, carried out with eight stages containing seven implementation sessions, while the control group itself was not given any action.	0,62	(-0,11) – (1,36)
Wilson and Ray (2018)	Amerika	Children's Aggression Scale (CAS)	The Child-Centered Play Therapy intervention was conducted for ten weeks with 16 sessions; each session consisted of 30 minutes of intervention for the experimental group, and the waitlist control group received the	-3,16	(-4,35) – (-1,96)

Researcher and Year	Country of origin	Measurement	Method	g	95% CI
intervention after the 8-week intervention period.					
Akbari, Monirpour, Mirzahosseini, Branch, and Branch (2021)	Iran	Child Symptoms Questionnaire and Child Behavior Inventory	Using the Parent-Based Play-Therapy intervention, eight sessions were conducted, each session lasting 60 minutes for the experimental group and the control group was not given the intervention.	0,82	(0,29) – (1,34)
Allahi (2014)	Iran	The Aggression Questionnaire Preschool Children	The play therapy intervention was conducted for ten sessions, with two sessions each week for the experimental group, and the control group was not given the playroom intervention.	-0,05	(-0,67) – (0,57)
Teimourian, Mirzaei, Pishyare, and Hosseinzadeh (2020)	Iran	Child Behavior Checklist (CBCL)	Using group play therapy intervention, receiving two occupational therapy sessions per week, the intervention group was also given group play therapy in 12 sessions (6 weeks, two sessions per week, each for 45-60 minutes) for the group and the control group was only given two occupational therapy sessions.	7,91	(5,31) – (10,51)

Results

The results of the statistical tests based on 14 selected journals show that play therapy interventions to reduce aggressiveness in children have a large effect size ($g = 1.50$; 95% CI = -0.290 to 3.286). The results of the statistical test of heterogeneity of variation also showed a value of $I^2 = 98.55\%$ which indicates that the results of this study show heterogeneous properties because they show a value greater than 80% (Borenstein et al., 2009).

In this study, researchers also tested using state moderators. Based on the analysis that tested the moderator variable, it was found that the effect size value that appeared was $g = 2.687$ (95% CI = -0.706 to 6.081), while the estimated value of the moderator itself was 0.657. The results show that the state moderator has little effect on play therapy and aggressiveness in children. In addition, the value of $I^2 = 98.49\%$ was also obtained with the value of Egger's Regression publication bias analysis results = 4.088 and $p\text{-value} = <0.001$. From the results

obtained through the analysis process, it can be seen that play therapy effectively reduces children's aggressiveness even though, in this case, it has a publication bias.

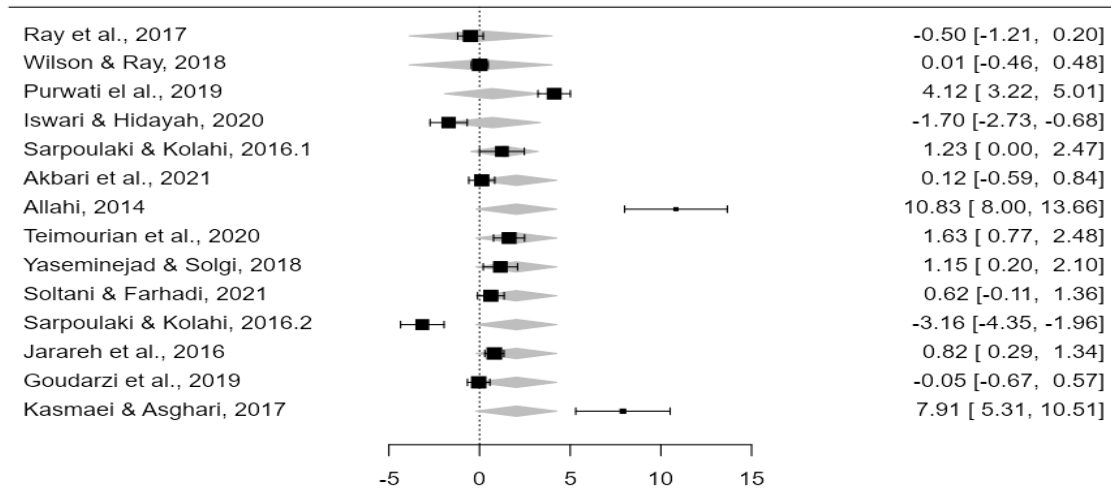


Figure 2. Forest Plot

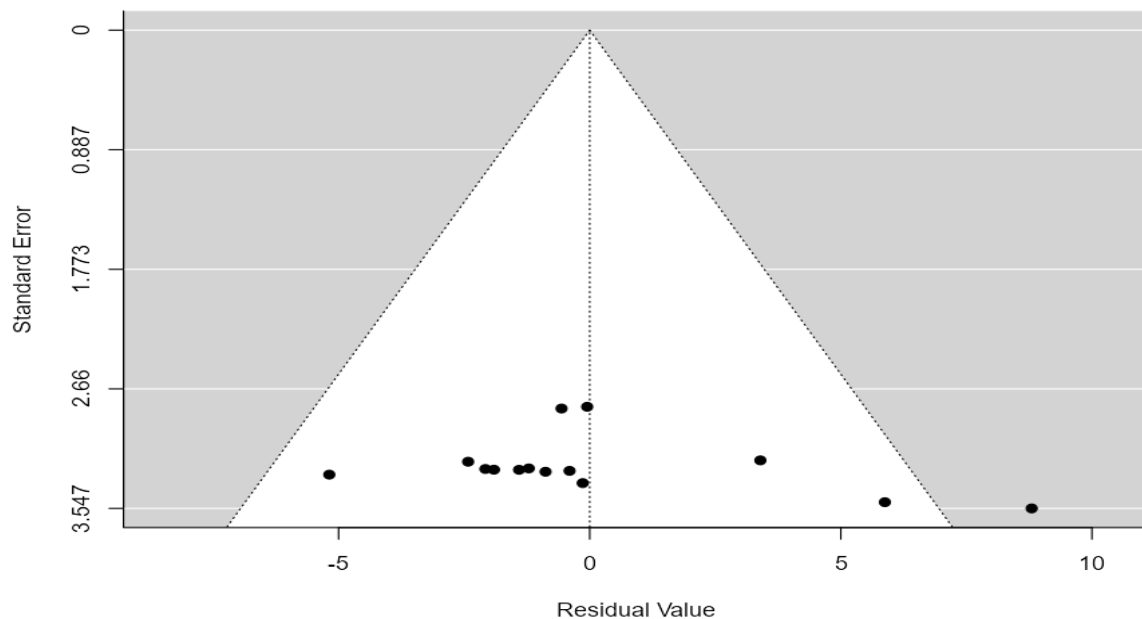


Figure 3. Funnel Plot

When viewed in Figure 2, it can be seen that the studies that have the largest effect size on the data used are studies from Allahi (2014) with a value of $g = 10.83$ (95% CI = (8.00) - (13.66)) and Kasmaei et al. (2017) with $g = 7.91$ (95% CI = (5.31) - (10.51)). In addition, based on several studies used in this study, it can also be seen that the study conducted by Wilson and Ray (2018) has the lowest effect size value with $g = 0.01$ (95% CI = (-0.46) - (0.48)).

Discussion

Based on the results of the tests carried out, it can be seen that the intervention using play therapy in reducing aggressiveness in children has a large effect size, indicating that play therapy is effective in reducing aggressiveness. This finding is in line with the results of (Putri & Cahyanti, 2021). The study found that play therapy can reduce aggressive behavior in children. This large effect size category is because the 14 studies used in this study have positive findings with an average effect size range of medium to large.

The results also show that all the studies used in this study show different effect sizes, which indicates that play therapy plays a role in reducing the level of aggression but has a different magnitude of influence. When reviewing the effect size values in the studies used in this research, it can be seen that there are some differences in characteristics, such as the number of subjects and the method of intervention provided.

The study that showed the highest effect size value was conducted by Allahi (2014); the study used 30 preschool children's research samples. The study divided the group into two parts, namely control and experimental. The intervention used in this study used play therapy, which was conducted for ten sessions with two sessions each week for the experimental group. For the study that has the lowest effect size value shown from Wilson & Ray research (2018), the study used 36 elementary school-age children as the experimental group and 35 children as the control group, and the intervention used in this study was child-centered play therapy (CCPT) and was conducted for 16 sessions for eight weeks with a duration of 30 minutes in each session. In addition, the two studies above also have differences in the research area; Allahi (2014) conducted a study in the Iranian region, while Wilson and Ray (2018) conducted their research study in the American region. Koç and Kafa (2019) explained that an individual's cultural background has a role in the psychotherapy system used. Riley, Higgins, and Deeks (2010) explained that different effect sizes in a research study can result from variations in data and measurement tools provided.

Based on the analysis results, it also appears that this study has publication bias, which indicates a need for negative findings in a study to determine the specifics of the shortcomings of the play therapy intervention used. Borenstein et al. (2021) explain that publication bias is a tendency for researchers and publishers to publish primary research results that show a significant impact. In addition, there is also a tendency to publish studies with high effect sizes rather than those with low effect sizes.

Conclusion

The results of this study indicate that play therapy has a large effect size and is effective in significantly reducing children's aggressiveness, and the moderator variable of country shows a small effect size, which means that the country where the study was conducted does not have a significant influence on play therapy interventions to reduce children's aggressiveness. Nevertheless, this study has publication bias that still needs to be considered. The studies used different measurement tools to measure aggressiveness in children, which can also cause publication bias. Puhan et al. (2006) explained that the existence of fundamental construct differences in a measurement can risk causing bias in the study.

Future researchers are expected to use replication by determining different subject characteristics and conducting further reviews of the heterogeneity of the research sample. It is also hoped that future research can consider further analysis of the type of play therapy intervention used as a moderator variable to obtain more in-depth findings.

References

- Ahn, E., & Kang, H. (2018). Introduction to systematic review and meta-analysis. *Korean Journal of Anesthesiology*, 71(2), 103–112. <https://doi.org/10.4097/kjae.2018.71.2.103>
- Akbari, A., Monirpour, N., Mirzahosseini, H., Branch, Q., & Branch, Q. (2021). The effectiveness of parent-based play therapy on aggression and symptoms of oppositional defiant disorder. *Quarterly Journal of Child Mental Health*, 8(1).
- Allahi, M. (2014). The effectiveness of play therapy on aggressiveness and anger control of children in centers of preschool children city of yasouj (Iran). *Indian Journal of Fundamental and Applied Life Sciences*, 1332–1337.
- Allen, J. J., & Anderson, C. A. (2017). Aggression and violence: definitions and distinctions. *The Wiley Handbook of Violence and Aggression*, 1–14. <https://doi.org/10.1002/9781119057574.whbva001>
- Bitá Sarpoulaki, & Parisa Kolahi. (2016). Role of play therapy on aggression and learning disabilities in students: a quasi-experimental design. *International Journal of Indian Psychology*, 3(4). <https://doi.org/10.25215/0304.021>
- Borenstein, M., Hedges, L. V., Higgins, J. P., & Rothstein, H. R. (2021). *Introduction to meta-analysis* (J. Wiley & Sons, Eds.).
- Borenstein, M., Hedges, L. V., Higgins, J. P. T., & Rothstein, H. R. (2009). Introduction to meta-analysis. In *An Introduction to Information Processing* (first edit). WILEY. <https://doi.org/10.1016/b978-0-12-209005-9.50005-9>

-
- Bosco, F. A., Aguinis, H., Singh, K., Field, J. G., & Pierce, C. A. (2015). Correlational effect size benchmarks. *Journal of Applied Psychology*, 100(2), 431–449. <https://doi.org/10.1037/a0038047>
- Chotim, M., Affifah, D. R., & Dewi, N. K. (2012). Mengurangi Tingkat Agresivitas Anak Usia TK melalui Terapi Bermain (Play Therapy). *Counsellia: Jurnal Bimbingan Dan Konseling*, 2(2).
- Ellis, P. D. (2010). The Essential Guide to Effect Sizes: statistical power, meta-analysis, and the interpretation of research result. In *The Essential Guide to Effect Sizes*. Cambridge University. <https://doi.org/10.1017/cbo9780511761676>
- Fitria, N., & Meiyuntariningsih, T. (2019). Pengaruh token ekonomi untuk mengurangi agresivitas pada anak. *Seminar Nasional Multidisiplin*, 258–264.
- Fritz, C. O., Morris, P. E., & Richler, J. J. (2012). Effect size estimates: current use, calculations, and interpretation. *Journal of Experimental Psychology: General*, 141(1), 2–18. <https://doi.org/10.1037/a0024338>
- Goudarzi, K., Meridian, S., & Roozbahani, M. (2019). Determining the Effectiveness of Game Therapy on Aggression, Stress and Anxiety in Children. *Journal of Motor and Behavioral Sciences*, 2(2), 116–125.
- Iswinarti, I., & Hidayah, N. (2020a). Empathy enhancement through group play therapy to reduce aggressive behavior. *Jurnal Konseling Dan Pendidikan*, 8(3), 151. <https://doi.org/10.29210/147900>
- Iswinarti, I., & Hidayah, N. (2020b). Empathy enhancement through group play therapy to reduce aggressive behavior. *Jurnal Konseling Dan Pendidikan*, 8(3), 151. <https://doi.org/10.29210/147900>
- Jarareh, J., Mohammadi, A., Nader, M., & Moosavian, S. A. (2016). The impact of group play therapy on creativity and control of aggression in preschool children. *Cogent Psychology*, 3(1), 1264655. <https://doi.org/10.1080/23311908.2016.1264655>
- Kasmaei, S. K., & Asghari, F. (2017a). Comparative study of the effects of narrative therapy and play therapy by group approach on inhibiting impulsivity, reducing aggression and increasing interpersonal relations. *World Family Medicine Journal: Incorporating the Middle East Journal of Family Medicine*, 15(4), 24–33.
- Kasmaei, S. K., & Asghari, F. (2017b). Play therapy by group approach on inhibiting impulsivity, reducing aggression and increasing interpersonal relations. *World Family Medicine/ Middle East Journal of Family Medicine*, 15(4), 24–33.
-

- Koç, V., & Kafa, G. (2019). Cross-Cultural Research on Psychotherapy: The Need for a Change. *Journal of Cross-Cultural Psychology*, 50(1), 100–115. <https://doi.org/10.1177/0022022118806577>
- Kyes, R. L. (2015). APA second edition dictionary of psychology. In *Dictionary of the old low and central Franconian psalms and glosses*. American Psychological Association. <https://doi.org/10.1515/9783111704227.1>
- Marini, T., Sholihah, M., & Nusir, L. (2024). Studi Kasus Perilaku Agresif Pada Anak Usia Dini. *Journal Buah Hati*, 11(1), 15–26.
- Mark W. Lipsey, D. W. (2001). Practical meta analysis overview. *Applied Social Research Methods Series*.
- Musslifah, A. R., Cahyani, R. R., Rifayani, H., & Hastuti, I. B. (2021). Peran Pola Asuh Orang Tua Terhadap Perilaku Agresif Pada Anak. *Jurnal Talenta Psikologi*, XVI(2), 5–21.
- Page, M. J., McKenzie, J. E., Bossuyt, P. M., Boutron, I., Hoffmann, T. C., Mulrow, C. D., Shamseer, L., Tetzlaff, J. M., Akl, E. A., Brennan, S. E., Chou, R., Glanville, J., Grimshaw, J. M., Hróbjartsson, A., Lalu, M. M., Li, T., Loder, E. W., Mayo-Wilson, E., McDonald, S., ... Moher, D. (2021). The PRISMA 2020 statement: An updated guideline for reporting systematic reviews. *The BMJ*, 372. <https://doi.org/10.1136/bmj.n71>
- Parfilova, G. G. (2016). Managing and preventing aggressiveness in primary school children. *International Electronic Journal of Mathematics Education*, 11(4), 921–931.
- Porter, M. L., Hernandez-Reif, M., & Jessee, P. (2009). Play therapy: A review. *Early Child Development and Care*, 179(8), 1025–1040. <https://doi.org/10.1080/03004430701731613>
- Post, C., Sarala, R., Gatrell, C., & Prescott, J. E. (2020). Advancing theory with review articles. *Journal of Management Studies*, 57(2), 351–376. <https://doi.org/10.1111/joms.12549>
- Pramudianti, D. T. (2019). *Efektivitas Play Therapy Berbasis Origami Untuk Mengurangi Perilaku Agresif Pada Anak Usia Dini*. Universitas Muhammadiyah Magelang.
- Pratiwi, D. A. (2023). *Game Play Therapy Dengan Media Permainan Tradisional untuk Meningkatkan Kontrol Diri Pada Anak Dengan Perilaku Agresi*. Universitas Muhammadiyah Malang.
- Puhan, M. A., Soesilo, I., Guyatt, G. H., & Schünemann, H. J. (2006). Combining scores from different patient reported outcome measures in meta-analyses: when is it justified? *Health and Quality of Life Outcomes*, 4(1), 94. <https://doi.org/10.1186/1477-7525-4-94>
- Purwati, A. H. AL., & Qomariyah, L. (2019). The effectiveness of play therapy and role playing in reducing children's aggressive behavior. *International Journal of Innovation, Creativity and Change*, 7(1), 209–222.

- Putri, N. D. P., & Cahyanti, I. Y. (2021a). Terapi Bermain untuk Menurunkan Perilaku Agresi pada Anak-anak di Pesantren X, Surabaya. *Jurnal Penelitian Pendidikan, Psikologi dan Kesehatan (J-P3K)*, 2(3), 259–267. <https://doi.org/10.51849/j-p3k.v2i3.121>
- Putri, N. D. P., & Cahyanti, I. Y. (2021b). Terapi Bermain untuk Menurunkan Perilaku Agresi pada Anak-anak di Pesantren X, Surabaya. *Jurnal Penelitian Pendidikan, Psikologi Dan Kesehatan (J-P3K)*, 2(3), 259–267. <https://doi.org/10.51849/j-p3k.v2i3.121>
- Ray, D. C., Blanco, P. J., Sullivan, J. M., & Holliman, R. (2009). An exploratory study of child-centered play therapy with aggressive children. *International Journal of Play Therapy*, 18(3), 162–175. <https://doi.org/10.1037/a0014742>
- Reef, J., Diamantopoulou, S., van Meurs, I., Verhulst, F. C., & van der Ende, J. (2011). Developmental trajectories of child to adolescent externalizing behavior and adult DSM-IV disorder: results of a 24-year longitudinal study. *Social Psychiatry and Psychiatric Epidemiology*, 46(12), 1233–1241. <https://doi.org/10.1007/s00127-010-0297-9>
- Riley, R. D., Higgins, J. P., & Deeks, J. J. (2010). Interpretation of random effects meta-analyses. *Bmj*, 342.
- Sarpoulaki, B., & Kolahi, P. (2016a). The Effectiveness of Play Therapy on Aggression Index, a Clinical Trial. *Imperial Journal of Interdisciplinary Research (IJIR)*, 2(7), 1308–1312.
- Sarpoulaki, B., & Kolahi, P. (2016b). Role of play therapy on aggression and learning disabilities in students: a quasi-experimental design. *IJIP. In. The International Journal of Indian Psychology*, 3(4), 12–22.
- Shelby, L. B., & Vaske, J. J. (2008). Understanding Meta-Analysis: A Review of the Methodological Literature. *Leisure Sciences*, 30(2), 96–110. <https://doi.org/10.1080/01490400701881366>
- Soltani, M., & Farhadi, H. (2021). The effectiveness of play therapy based on the relationship parent child (filial therapy) on addiction to computer games, and aggression in preschoolers. *Knowledge & Research in Applied Psychology*, 22(8), 13–21.
- Teimourian, S., Mirzaei, H., Pishyare, E., & Hosseinzadeh, S. (2020a). Effect of group play therapy on emotional/behavioral problems of children with attention deficit hyperactivity disorder Aged 6-12 years. *Journal of Rehabilitation*, 21(3), 390–405. <https://doi.org/10.32598/rj.21.3.3158.1>
- Teimourian, S., Mirzaei, H., Pishyare, E., & Hosseinzadeh, S. (2020b). Effect of Group Play Therapy on Emotional/Behavioral Problems of Children With Attention Deficit Hyperactivity Disorder Aged 6-12 Years. *Journal of Rehabilitation*, 21(3), 390–405. <https://doi.org/10.32598/RJ.21.3.3158.1>

- Vergunst, F., Tremblay, R. E., Nagin, D., Algan, Y., Beasley, E., Park, J., Galera, C., Vitaro, F., & Côté, S. M. (2019). Association Between Childhood Behaviors and Adult Employment Earnings in Canada. *JAMA Psychiatry*, 76(10), 1044. <https://doi.org/10.1001/jamapsychiatry.2019.1326>
- Wilson, B. J., & Ray, D. (2018). Child-Centered Play Therapy: Aggression, Empathy, and Self-Regulation. *Journal of Counseling & Development*, 96(4), 399–409. <https://doi.org/10.1002/jcad.12222>
- Yaseminejad, P., & Solgi, Z. (2018). Effectiveness of Play Therapy Based on Cognitive Behavior Therapy on Physical Relational and Verbal Aggression of Preschool Children. *International Journal of Applied Behavioral Sciences*, 5(2), 9–15.