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The Effect of Cartoon Video Distraction Therapy on Pain Levels in Preschool Children During IV Insertion at Kajen Regional General Hospital, Pekalongan Regency

Rahayu Winarti[1*], Kamelia Milatin[2]
Universitas Widya Husada Semarang
Corresponding Author: Rahayu Winarti rahayuwh57@gmail.com

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A B S T R A C T
Intravenous infusions are a common invasive procedure performed on children and can cause pain and discomfort, especially in preschoolers who have limited pain regulation abilities. Unresolved pain can trigger anxiety, fear, and hinder medical procedures. One non-pharmacological intervention that can be used is audiovisual distraction therapy through cartoon videos, which works by shifting the child's attention from painful stimuli to pleasant stimuli. This study aimed to determine the effect of cartoon video distraction therapy on pain levels in preschool children during IV insertion at Kajen Regional Hospital, Pekalongan Regency. The method used was a Two-Group Posttest Design, with 60 respondents divided into an intervention group and a control group of 30 children each. The intervention group was given a 2–4-minute cartoon video before and during the procedure. Pain was measured using the FLACC scale, and bivariate analysis used the Mann-Whitney test. Ethics Test No.: 02/EC-LPPM/UWHS/I-2026 The results showed a significant difference between the two groups with a p-value of 0.003 ($p < 0.05$), indicating that distraction therapy was effective in reducing pain. Cartoon video distraction therapy was effective in reducing pain levels in preschool-aged children during IV insertion. This intervention can be used as a safe, easy-to-implement, and effective complementary therapy to support atraumatic nursing care for children in hospitals.

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INTRODUCTION

Children aged 3–6 years are in a golden phase of development, characterized by rapid physical, cognitive, and emotional development. At this stage, children are highly curious but not yet fully able to understand or manage unfamiliar situations, such as medical procedures in a hospital. Furthermore, their immature immune systems make them more susceptible to illness and injury, often requiring hospitalization (Firmansyah et al, 2021).

Hospitalization, which is the process in which a child is admitted to hospital to undergo intensive therapy or treatment (Rusdi et al., 2020),, not only impacts a child's physical condition but also their emotional state. The unfamiliar hospital environment from the room, medical equipment, to interactions with healthcare workers often triggers stress, tension, and fear, especially when a child has to undergo an invasive medical procedure (Ni wayah Rahayu et al, 2023).

One of the most common invasive procedures performed on children is IV insertion. This procedure involves inserting a needle into a vein, which naturally causes pain. Preschool children typically experience pain accompanied by reactions such as crying, screaming, grimacing, avoiding, or even refusing the procedure (Giri Susilo et al, 2022). A child's pain level is influenced by several factors, such as the level of cognitive development, previous experience with medical procedures, health conditions, and parental support during the procedure (Zakiyah Ana, 2022).

Study Younanda et al., (2021) Studies have shown that IV insertion procedures in preschool children often cause moderate to severe pain, with most children exhibiting physical responses such as muscle tension, loud crying, and attempts to withdraw their hand. If pain is not managed effectively, this can negatively impact the child's comfort, increase the trauma of the medical procedure, and hinder the smoothness of the procedure.

Non-pharmacological approaches are an important strategy in pediatric pain management. One method proven effective is distraction therapy, which diverts a child's attention from pain through enjoyable activities. Based on gate control theory, sensory stimulation, such as visual, auditory, or a combination of both, can help reduce pain perception by closing the "gate" that transmits pain impulses to the brain (Novieastari et al., 2020).

LITERATURE REVIEW

Various forms of distraction have been studied, such as listening to music, reading story books, playing puzzles, and watching videos. Renca Latifah et al (2025) found that watching cartoons significantly reduced pain scores in preschool children during injections ($p = 0.001$). Meanwhile, Jiang & Yoo (2024) reported a 2.1-point reduction in pain scores after audio-visual intervention ($p = 0.020$).

A preliminary study in the Pediatric Ward of Kajen Regional Hospital, Pekalongan Regency, in 2025 showed that an average of 90 pediatric inpatients were admitted each month over the past three months. Observations indicated that children aged 3–6 often cried, grimaced, or resisted IV insertion. Previously,

healthcare workers had used simple toys or verbal communication to reduce tension, but these approaches were not entirely effective.

To date, the use of cartoon video distraction therapy as a systematic and structured strategy has not been implemented at Kajen Regional Hospital. This method is relatively easy, inexpensive, non-invasive, and can be used repeatedly without side effects. Therefore, research is needed to determine the effect of cartoon video distraction therapy on pain levels in preschool-aged children during IV insertion procedures, in order to improve the comfort and quality of pediatric nursing services. Based on this phenomenon, researchers are interested in conducting a study entitled "The Effect of Cartoon Video Distraction Therapy on Pain Levels in Preschool-Aged Children during IV Insertion Procedures at Kajen Regional Hospital, Pekalongan Regency."

METHODOLOGY

This research has obtained ethical approval from the Ethics Commission of Widya Husada University Semarang with number 02/EC-LPPM/UWHS/I-2026. The type of research used is quantitative with a Two-Group Posttest Design experiment. The sample consisted of 60 respondents of preschool-aged children undergoing inpatient treatment, who were selected using a purposive sampling technique and divided into two groups, namely the intervention group and the control group, each consisting of 30 respondents (Sugiyono, 2020).

The independent variable in this study was cartoon video distraction therapy, while the dependent variable was the pain level of preschool-aged children during IV insertion. Data collection was conducted using the FLACC scale observation sheet to measure pain intensity before and after the procedure. The intervention was provided by playing a 2–4-minute cartoon video before and during the IV insertion procedure (Nursalam, 2022).

Data analysis was carried out using a non-parametric statistical test, namely the Mann-Whitney test, to determine the difference in pain levels between the intervention group and the control group (Notoatmodjo, 2020)

RESEARCH RESULTS

Respondent Characteristics Based on Gender and Age at the Time of Infusion Installation at Kajen Regional Hospital, Pekalongan Regency

Table 1. Gender and Age Distribution of Preschool-Aged Children Respondents at Kajen Regional Hospital, Pekalongan Regency, January 2025 (n = 60)

Gender	Frequency (f)	Percentage (%)
Man	28	46.7
Woman	32	53.3
Total	**60**	**100.0**
4 years	16	26.7
5 years	30	50.0
6 Years	14	30.3
Total	**60**	**100.0**

The results of the study showed that the majority of preschool-aged children at Kajen Regional Hospital, Pekalongan Regency, were female, with 32 respondents (53.3%), while 28 respondents (46.7%) were male. This data indicates that the gender distribution of respondents is relatively balanced, although there is a slight predominance of female respondents compared to male respondents.

The results of the study showed that the majority of preschool-age respondents at Kajen Regional Hospital, Pekalongan Regency, were 5 years old, with 30 respondents (50.0%). There were 16 respondents aged 4 years (26.7%), while 14 respondents aged 6 years (30.3%). This data shows that the age distribution of respondents was dominated by 5-year-olds, while the 4- and 6-year-olds had a relatively smaller proportion.

Description of Pain Levels Given Cartoon Video Distraction Therapy in the Intervention Group

Table 2. Distribution of pain levels given cartoon video distraction therapy in the intervention group January 2025 (n = 30)

Pain Level	Frequency (f)	Percentage (%)
Mild pain	13	43.3
Moderate Pain	17	56.7
Total	**30**	**100.0**

The results showed that in the intervention group given cartoon video distraction therapy, the majority of children experienced moderate pain, namely 17 children (56.7%), while 13 children (43.3%) experienced mild pain. These results indicate that providing cartoon video distraction therapy did not completely reduce the children's pain levels to the mild category, but still played a role in helping children divert attention during the IV procedure.

Description of Pain Levels Given Treatment (Without Cartoon Video Distraction Therapy) in the Control Group

Table 3. Distribution of pain levels given treatment (without cartoon video distraction therapy) in the control group January 2025 (n = 30)

Pain Level	Frequency (f)	Percentage (%)
Mild pain	6	20.0
Moderate Pain	24	80.0
Total	**30**	**100.0**

The results showed that in the control group that was not given cartoon video distraction therapy, the majority of children experienced moderate pain, namely 24 children (80.0%), while 6 children (20.0%) experienced mild pain. These results indicate that without distraction therapy, children tend to experience higher levels of pain during IV insertion.

Table 4. The effect of cartoon video distraction therapy on pain levels in preschool children during IV insertion at Kajen Regional Hospital, Pekalongan Regency, January 2025 (n=30).

implementation	Mean Rank	Sum of Ranks	Z Score	P Value
Intervention	36.65	1099.50	-3,016	0.003
Control	24.35	730.50		

Based on Table 4.6, the results of the analysis using the Mann-Whitney test show that the Mean Rank value in the intervention group was 36.65 with a Sum of Ranks of 1099.50, while in the control group the Mean Rank value was 24.35 with a Sum of Ranks of 730.50. The results of the statistical test obtained a Z value = -3.016 with a p-value = 0.003 ($p < 0.05$), which means there is a significant difference between the intervention group and the control group.

These results indicate that cartoon video distraction therapy significantly reduced pain levels in preschool-aged children during IV insertion. Children who received cartoon video distraction therapy tended to experience lower pain levels compared to those who did not receive distraction therapy. Psychologically, cartoon video distraction can divert children's attention from painful stimuli and the pain caused by invasive procedures, thereby reducing their perception of pain. Furthermore, engaging cartoons can provide a sense of enjoyment and comfort, help reduce stress responses, and improve children's ability to remain calm and cooperative during IV insertion procedures.

DISCUSSION

Respondent Characteristics

The results of the study indicate that the majority of preschool-aged children at Kajen Regional Hospital, Pekalongan Regency, were female, comprising 32 (53.3%), while 28 (46.7%) were male. This distribution indicates a relatively balanced distribution of boys and girls, although there was a slight predominance of female respondents. This suggests that gender differences are not particularly striking in the characteristics of the study respondents.

Gender is one demographic characteristic that can influence how children express pain levels during invasive procedures such as IV insertion. Psychological and emotional differences between boys and girls can influence how they express pain responses, both verbally and nonverbally. According toZakiyah Ana (2021), gender plays a role in an individual's psychological responses, including the perception and expression of pain that arises from situations that cause stress or discomfort.

Several studies have shown that girls tend to be more expressive in their pain responses, such as crying, grimacing, or showing fear, so that the perceived level of pain often appears higher. Meanwhile, boys tend to display pain responses in the form of active behaviors, such as refusing action, rebelling, or remaining still but tense. These differences in pain expression do not necessarily

reflect differences in actual pain intensity, but rather differences in patterns of emotional expression (Pakpahan et al, 2021).

Research results show that children's pain levels during IV insertion are not determined by gender, but rather are influenced by psychological and environmental factors, such as anxiety, previous experiences, and support provided during the procedure. The presence of parents and a reassuring approach from healthcare professionals play a crucial role in helping children manage pain perception, in both boys and girls.

Research by Fitriana and Yuliani (2022) found that reducing pain levels in children during nursing procedures is more effective through therapeutic approaches and emotional support than considering gender differences. The use of non-pharmacological techniques, such as visual distraction, age-appropriate communication, and empathetic attitudes, has been shown to significantly reduce pain levels in children regardless of gender.

The results of this study concluded that, despite a slight predominance of female respondents, gender was not a major factor influencing children's pain levels during IV insertion. Pain management efforts should focus on nursing interventions that address the child's emotional needs, the application of appropriate distraction techniques, and providing a sense of safety and comfort during the procedure.

The results of the study showed that the majority of preschool-aged children respondents at Kajen Regional Hospital, Pekalongan Regency were 5 years old, namely 30 respondents (50.0%), while 4-year-old respondents numbered 16 respondents (26.7%) and 6-year-old respondents numbered 14 respondents (23.3%). This distribution shows that children who underwent IV insertion came from various preschool age ranges, with a predominance of 5-year-olds.

Age is one factor that can influence the level of pain a child feels and expresses during an IV procedure. Differences in developmental stages at each age affect a child's ability to understand pain stimuli, interpret pain sensations, and express pain verbally and nonverbally. According to Zakiyah Ana (2021), the level of cognitive development of children is related to the perception and response to pain, especially during invasive medical procedures.

Five-year-old children are in the preoperational stage of development, where language skills have developed, enabling them to verbally express pain complaints. However, at this age, pain coping mechanisms are immature, so painful stimuli, such as IV insertion, can still be perceived with considerable intensity. This puts five-year-olds at risk of experiencing moderate to severe pain during procedures. Research by Fitriana and Yuliani (2022) suggests that preschoolers require appropriate interventions, such as distraction techniques, to help reduce pain perception during nursing procedures.

Four-year-olds tend to have a more limited ability to understand and control pain sensations, so they often display more pronounced pain responses, such as crying, grimacing, or withdrawing limbs during IV insertion. Conversely, six-year-olds begin to show better adaptation to medical procedures, so even though pain is still felt, the intensity of the pain they display tends to be lower

than at younger ages. According to Sari et al. (2020), increasing age is associated with increased self-regulation and pain tolerance.

The results of this study indicate that age differences in children are not a major inhibiting factor in pain management during IV insertion. Optimal pain management remains essential for all preschool children through developmentally appropriate nursing approaches, providing support during procedures, and implementing non-pharmacological interventions such as distraction therapy to help reduce pain levels during medical procedures.

Description Of Pain Levels Given Cartoon Video Distraction Therapy In The Intervention Group

The results showed that in the intervention group given cartoon video distraction therapy, the majority of preschool-aged children undergoing IV insertion at Kajen Regional Hospital, Pekalongan Regency, experienced moderate pain, namely 17 children (56.7%), while 13 children (43.3%) experienced mild pain. No children were found to have severe pain in the intervention group. These findings indicate that providing cartoon video distraction therapy plays a role in reducing the intensity of children's pain, although not all of them were able to reduce pain to the mild category in all respondents.

Cartoon video distraction therapy is a non-pharmacological intervention aimed at diverting a child's attention from the painful stimulus caused by IV insertion. Engaging visual and audio displays can increase a child's focus on pleasant stimuli, thereby reducing their perception of pain. According to Efendy (2020), audiovisual distraction can inhibit the transmission of pain impulses to the central nervous system through a competitive attention mechanism, thus reducing the intensity of the child's pain.

The predominance of moderate pain in the intervention group indicates that children's pain levels are influenced not only by distraction but also by other factors, such as age, previous medical procedure experience, individual pain threshold, and the child's physical condition at the time of IV insertion. In preschool children, the pain regulation system is not yet optimally developed, so even when attention is diverted, painful stimuli can still be perceived at a certain intensity. This is in line with research by Wulandari et al. (2020) which stated that distraction therapy is effective in reducing pain levels, but the extent of the reduction can vary between individuals.

Furthermore, the effectiveness of cartoon video distraction therapy is also influenced by the appropriateness of the type of broadcast, the duration of the distraction, and the child's level of engagement during the intervention. Children who are engaged and focused on the broadcast tend to show better pain reduction than those who are less engaged. Prasetyo and Rahmawati (2024) explain that audiovisual distraction will provide optimal results when tailored to the child's interests and supported by a child-friendly nursing approach.

The results of this study indicate that cartoon video distraction therapy has a positive impact on pain management in children during IV insertion. This is indicated by the absence of severe pain in the intervention group and an increase

in the proportion of children with mild pain. These findings support the application of cartoon video distraction therapy as part of atraumatic nursing care to reduce pain levels in preschool-aged children during invasive procedures.(Padila et al, 2024).

Description Of Pain Levels Given Treatment (Without Cartoon Video Distraction Therapy) In The Control Group)

The results showed that in the control group that was not given cartoon video distraction therapy, the majority of preschool-aged children undergoing IV insertion at Kajen Regional Hospital, Pekalongan Regency experienced moderate pain, namely 24 children (80.0%), while 6 children (20.0%) experienced mild pain. No children were found with severe pain in the control group. These findings indicate that without non-pharmacological intervention in the form of distraction therapy, children tend to experience higher levels of pain when undergoing invasive procedures such as IV insertion.

The absence of distraction therapy causes children to focus more on painful stimuli, such as the penetration of the IV needle and the discomfort caused during the procedure. This contributes to the child's increased perception of pain. According to Efendy (2020), without a distraction mechanism, pain impulses are fully received by the central nervous system, resulting in a greater intensity of pain.

The high proportion of moderate pain in the control group indicates that without supportive intervention, children have limited ability to manage painful stimuli during medical procedures. Preschool-aged children do not yet have optimal pain regulation skills, so they tend to display more pronounced pain responses, both verbally and nonverbally. Wulandari et al. (2020) stated that children who do not receive non-pharmacological interventions during invasive nursing procedures are at higher risk of experiencing moderate to severe pain.

Furthermore, the control group in this study received only standard care without additional interventions for pain management, thus limiting pain reduction efforts. Unlike the intervention group, which received cartoon video distraction therapy, children in the control group did not receive positive stimuli to distract from the sensation of pain during IV insertion. Prasetyo and Rahmawati (2024) explain that non-pharmacological interventions such as audiovisual distraction play a crucial role in reducing pain perception and helping children become more cooperative during medical procedures.

The results of this study align with those of Abidin et al. (2025), who found that children who did not receive supportive interventions tended to experience higher levels of pain during invasive procedures. Poorly managed pain can increase physiological responses to painful stimuli, such as muscle tension and increased heart rate, potentially complicating IV insertion.

Based on these findings, it can be concluded that the absence of cartoon video distraction therapy in the control group contributed to the high level of pain experienced by children during IV insertion. This underscores the importance of implementing non-pharmacological interventions as part of atraumatic nursing

care for children, to help reduce pain levels, increase comfort, and facilitate smooth medical procedures.(Rini et al, 2022).

The Effect Of Cartoon Video Distraction Therapy On Pain Levels In Preschool Children During IV Insertion At Kajen Regional Hospital, Pekalongan Regency

Based on the results of the analysis using the Mann–Whitney test in Table 4.6, the Mean Rank value in the intervention group was 36.65 with a Sum of Ranks of 1099.50, while in the control group the Mean Rank value was 24.35 with a Sum of Ranks of 730.50. The results of the statistical test showed a Z value = -3.016 with a p-value = 0.003 ($p < 0.05$), which means there is a significant difference between the intervention group and the control group. Thus, it can be concluded that the provision of cartoon video distraction therapy has a significant effect on the pain level of preschool children during IV insertion.

The difference in Mean Rank values indicates that children who received cartoon video distraction therapy tended to experience lower pain levels compared to children who did not receive distraction therapy. In the control group, children received standard care without any supportive interventions for pain management, so the pain stimulus from the IV insertion procedure was felt more intensely. This confirms that cartoon video distraction therapy is an effective non-pharmacological intervention in reducing children's pain levels during invasive procedures.

In preschool children, pain perception is still heavily influenced by limited cognitive abilities and underdeveloped pain regulation mechanisms. Cartoon video distraction therapy works by shifting the child's attention away from painful stimuli and toward pleasurable audiovisual stimuli. This mechanism creates attentional competition, inhibiting the transmission of pain impulses to the cerebral cortex, reducing the intensity of the pain experienced by the child. According to Efendy (2020), audiovisual distraction can reduce pain perception by suppressing sympathetic nervous system activation.

Furthermore, cartoon videos, both visual and audio, can create a more comfortable environment for children during the procedure. This helps reduce physiological responses to pain, such as muscle tension and increased heart rate, making the child more cooperative and allowing for a more optimal IV insertion.Wiji Sanjaya et al (2022), reducing pain perception through distraction will have a direct impact on reducing the intensity of pain felt by the child.

Providing cartoon video distraction therapy as a non-pharmacological intervention aligns with the principles of atraumatic nursing care, which emphasizes minimizing the impact of pain and discomfort on children during treatment. This intervention is easy to implement, safe, non-invasive, and does not require significant resources, making it suitable for use in pediatric nursing practice, including in the emergency room with limited time. Wulandari et al. (2020) stated that audiovisual distraction is effective in reducing pain levels and increasing children's cooperation during invasive nursing procedures.

The results of this study also align with research by Prasetyo and Rahmawati (2024), which showed that children who received audiovisual distraction during medical procedures experienced lower pain levels compared to children who did

not receive distraction. Research by Abidin et al. (2025) added that poorly managed pain in children can trigger physiological responses that could potentially disrupt the smooth running of medical procedures. Therefore, providing cartoon video distraction therapy has been shown to suppress these pain responses, allowing for safer and more effective IV insertion procedures.

Based on the results of this study, it can be confirmed that cartoon video distraction therapy significantly reduced pain levels in preschool-aged children during IV insertion at Kajen Regional Hospital, Pekalongan Regency. This therapy is recommended as an effective non-pharmacological intervention worthy of integration into standard operating procedures for pediatric nursing to improve child comfort, support smooth medical procedures, and enhance the overall quality of nursing care.

CONCLUSIONS

1. The characteristics of preschool-aged respondents who underwent IV insertion at Kajen Regional Hospital, Pekalongan Regency, showed that the majority of respondents were female (32 children) (53.3%), while the majority were male (28 children) (46.7%). The age distribution of respondents was dominated by 5-year-old children (30 children) (50.0%), followed by 4-year-old children (16 children) (26.7%) and 6-year-old children (14 children) (30.3%).
2. The description of the level of pain/pain of children in the intervention group who were given cartoon video distraction therapy showed that most children experienced moderate pain, namely 17 children (56.7%), while 13 children (43.3%) experienced mild pain. No children were found with severe pain in the intervention group.
3. The description of the level of pain/pain of children in the control group who were not given cartoon video distraction therapy showed that most of the children experienced moderate pain, as many as 24 children (80.0%), while 6 children (20.0%) experienced mild pain. No children were found with severe pain in the control group.
4. The results of the bivariate analysis using the Mann-Whitney test showed a significant difference between the intervention group and the control group with a p-value of 0.003 ($p < 0.05$). The Mean Rank value of the intervention group was higher than that of the control group, indicating that the provision of cartoon video distraction therapy had a significant effect in reducing the level of pain in preschool children during IV insertion at Kajen Regional Hospital, Pekalongan Regency.

RECOMMENDATIONS

1. For Healthcare Institutions

   The results of this study are expected to provide input for healthcare institutions, particularly Kajen Regional Hospital, Pekalongan Regency, to optimize policies and standards for pediatric nursing services by integrating cartoon video distraction therapy as part of atraumatic nursing care. The application of audiovisual distraction therapy during invasive procedures

such as IV insertion in the emergency room and pediatric ward is expected to help reduce pain levels and improve comfort, and expedite the implementation of nursing procedures.

2. For the Nursing Profession
   The results of this study are expected to enhance nurses' insight and skills in implementing non-pharmacological nursing interventions that focus on children's psychological needs. Nurses are expected to be able to use cartoon video distraction therapy appropriately, tailored to the child's age and interests, and combined with therapeutic communication to help the child remain calm and cooperative during IV insertion.
3. For Parents and Society
   The results of this study are expected to increase parents' and the community's understanding of the importance of psychological support during medical procedures. Parents are expected to play an active role in helping their children distract themselves through preferred media, such as cartoons, and to provide emotional support in the form of calm, touch, and reassuring communication. Optimal parental support is expected to help reduce children's pain and prevent psychological trauma during treatment in healthcare facilities.

ADVANCED RESEARCH

This study is expected to serve as a reference for future researchers to develop research with a larger sample size and a more robust research design, such as a randomized controlled trial. Future researchers are also advised to explore other factors that may influence pain levels and child pain, such as age, previous medical experience, initial pain level, parental involvement, and variations in the types of audiovisual distraction media used.

REFERENCES

Firmansyah et al. (2021). Faktor-Faktor Yang Mempengaruhi Kejadian Diare Pada Balita. *KOSALA : Jurnal Ilmu Kesehatan*, *8*(2), 63–70. https://doi.org/10.37831/jik.v8i2.190

Giri Susilo et al. (2022). *Buku Modul Standar Operasional Prosedur (SOP) Keterampilan Keperawatan*. Lembaga Omega Medika.

Ni wayah Rahayu et al. (2023). *Bunga Rampai Manajemen Nyeri*. PT Media Pustaka Indo.

Notoatmodjo, S. (2020). *Metode Penelitian Kesehatan* (R. C. PT (red); 3rd ed). PT, Rineka Cipta.

Novieastari, E., Ibrahim, Kusman, & Ramdaniati, Sri. (2020). *Dasar-dasar Keperawatan Potter & Perry*. Elsevier.

Nursalam. (2022). *Metodologi penelitian ilmu keperawatan*. Salemba medika.

Padila et al. (2024). Hubungan Komunikasi Terapeutik Perawat dengan Tingkat Kecemasan Orang Tua Saat Pemasangan Infus pada Anak. *Jurnal …*, *6*, 1527–1538. http://jurnal.globalhealthsciencegroup.com/index.php/JPPP/article/view/2809

Pakpahan et al. (2021). Promosi Kesehatan & Prilaku Kesehatan. In *Yayasan Kita Menulis*. Yayasan Kita Menulis.

Renca Latifah et al. (2025). Implementasi Teknik Distraksi Audiovisual Terhadap Penurunan Kecemasan Saat Prosedur Injeksi Pada Anak Usia Prasekolah. *Jurnal Manajemen Kesehatan dan Keperawatan*, *1*(4), 187–192. https://doi.org/10.35968/yvb4wt76

Rini et al. (2022). Efektivitas Menonton Video Kartun terhadap Tingkat Nyeri Selama Prosedur Invasif pada Anak Sekolah. *Journal of Telenursing (JOTING)*, *4*(1), 410–420. https://doi.org/10.31539/joting.v4i1.3795

Rusdi, A. E., Alfiyanti, D., & Nurullita, U. (2020). Pengaruh Tehnik Distraksi Menoton Film Kartun Untuk Menurunkan Stress Hospitalisasi Pada Anak Pra Sekolah Di Rsud Tugurejo Semarang. *Jurnal Ilmu Keperawatan dan Kebidanan*, *1*, 1–7.

Sugiyono. (2020). *Metodologi Penelitian Kuantitatif, Kualitatif dan R & D*.

Tirtayanti et al. (2025). *Parental holding terhadap distress prosedur terapi intravena (IV) pada anak di rumah sakit*. *19*(2), 362–367.

Wiji Sanjaya1,Lilla Maria2, R. M. (2022). PENGARUH PEMBERIAN TEKNIK DISTRAKSI AUDIO VISUAL TERHADAP SKALA NYERI PADA PASIEN ANAK POST OPERASI. *STIKES Maharani Malang, Indonesia*, *10*(1), 1–52. https://doi.org/10.21608/pshj.2022.250026

Younanda, P., Immawati, & Dewi, T. kesuma. (2021). Penerapan Teknik Distraksi Menonton Kartun Animasi Untuk Mengatasi Masalah Keperawatan Nyeri Saat Dilakukan Pemasangan Infus Pada Anak Prasekolah (3-5 Tahun). *Jurnal Cendikia Muda*, *1*(2), 188–193.

Zakiyah Ana. (2022). *Nyeri Konsep dan Penatalaksanaan Dalam Praktik Keperawatan Berbasis Buku*. Salemba Medika.