

A List of the Excluded Reports (full texts)

Duplicates (n=14):

1. Stinson J, Jibb L, Nathan P, Beran T, Hum V. Using a humanoid robot to reduce procedural pain in children with cancer: a pilot randomized controlled trial. In WILEY-BLACKWELL 111 RIVER ST, HOBOKEN 07030-5774, NJ USA; 2016. p. S54–5.
2. Ali S, Manaloor R, Ma K, Sivakumar M, Vandermeer B, Beran T, et al. LO63: Humanoid robot-based distraction to reduce pain and distress during venipuncture in the pediatric emergency department: A randomized controlled trial. *Canadian Journal of Emergency Medicine*. 2019;
3. Ali S, Maki C, Xie J, Lee B, Freedman S. 112 Characterizing Pain in Children with Acute Gastroenteritis in the Emergency Department. *Paediatrics & Child Health*. 2019;24(Supplement_2):e43–e43.
4. Lee-Krueger RC, Pearson JR, Spencer A, Noel M, Bell-Graham L, Beran TN. Children's pain during IV induction: A randomized-controlled trial with the MEDi® robot. *Journal of Pediatric Psychology*. 2021;46(8):991–1000.
5. Lee R, Pearson J, Spencer A, Noel M, Bell-Graham L, Beran T. 75 Efficacy of MEDi® preparation to manage children's pain and fear during IV inductions: a randomized-controlled trial. *Paediatrics & Child Health*. 2019;24:e29–30.
6. Kasimoglu Y, Kocaaydin S, Karsli E, Esen M, Bektas I, Ince G, et al. Robotic approach to the reduction of dental anxiety in children. *Acta Odontologica Scandinavica*. 2020;78(6):474–80.
7. Ali S, Sivakumar M, Beran T, Scott SD, Vandermeer B, Curtis S, et al. Study protocol for a randomised controlled trial of humanoid robot-based distraction for venipuncture pain in children. *Bmj Open*. 2018;8(12).
8. Yelda Kasımoğlu. Effect of a Humanoid Robot on Dental Anxiety in Children [Internet]. 2023 [cited 2024 Aug 18]. Available from: <https://clinicaltrials.gov/study/NCT05238246>
9. Emma Rhee. Using a Humanoid Robot to Distract Children With Chronic Conditions Undergoing Painful Procedures | ClinicalTrials.gov [Internet]. 2022 [cited 2024 Aug 19]. Available from: <https://clinicaltrials.gov/study/NCT04003701>
10. Tanya Beran. MEDi Robot for Pain Management at Induction [Internet]. 2021 [cited 2024 Aug 18]. Available from: <https://clinicaltrials.gov/study/NCT02859051>
11. Rossi S, Santini SJ, Genova DD, Maggi G, Verrotti A, Farello G, et al. Using the Social Robot NAO for Emotional Support to Children at a Pediatric Emergency Department: Randomized Clinical Trial. *Journal of Medical Internet Research*. 2022 Jan 13;24(1):e29656.
12. Rheel E, Vervoort T, Malfliet A, van der Werff ten Bosch J, Debulpaep S, Robberechts W, et

- al. The effect of robot-led distraction during needle procedures on pain-related memory bias in children with chronic diseases: a pilot and feasibility study. *Children*. 2022;9(11):1762.
13. Lee-Krueger RCW, Pearson JR, Spencer A, Noel M, Bell-Graham L, Beran TN. Children's Pain During IV Induction: A Randomized-Controlled Trial With the MEDi® Robot. *Journal of Pediatric Psychology*. 2021 Sep 1;46(8):991–1000.
14. Jibb LA, Birnie KA, Nathan PC, Beran TN, Hum V, Victor JC, et al. Using the MEDiPORT humanoid robot to reduce procedural pain and distress in children with cancer: A pilot randomized controlled trial. *Pediatr Blood Cancer*. 2018 Sep;65(9):e27242.

No needling treatment while using robots (n=6):

1. Crossman MK, Kazdin AE, Kitt ER. The influence of a socially assistive robot on mood, anxiety, and arousal in children. *Professional Psychology: Research and Practice*. 2018;49(1):48–56
2. Topçu SY, Semerci R, Kostak MA, Güray Ö, Sert S, Yavuz G. The effect of an interactive robot on children's post-operative anxiety, mobilization, and parents' satisfaction; randomized controlled study. *J Pediatr Nurs*. 2023;68:e50–7.
3. Tanaka K, Hayakawa M, Noda C, Nakamura A, Akiyama C. Effects of artificial intelligence aibo intervention on alleviating distress and fear in children. *Child Adolesc Psychiatry Ment Health*. 2022 Nov 23;16(1):87.
4. Oland GL, Wertz J, Comulada WS, Ogaryan V, Pike M, Shekherdimian S, et al. Robot Telepresence for Children in Healthcare Settings. *Pediatrics*. 2022 Feb 23;149(1 Meeting Abstracts February 2022):270.
5. Logan DE, Breazeal C, Goodwin MS, Jeong S, O'Connell B, Smith-Freedman D, et al. Social Robots for Hospitalized Children. *Pediatrics*. 2019 Jul 1;144(1):e20181511.
6. Kitt ER, Crossman MK, Matijczak A, Burns GB, Kazdin AE. Evaluating the Role of a Socially Assistive Robot in Children's Mental Health Care. *J Child Fam Stud*. 2021 Jul 1;30(7):1722–35.

Not meet the definition of social robots (n=2):

1. Williams N, MacLean K, Guan L, Collet JP, Holsti L. Pilot Testing a Robot for Reducing Pain in Hospitalized Preterm Infants. *OTJR: Occupational Therapy Journal of Research*. 2019 Apr 1;39(2):108–15.
2. Holsti L, MacLean K, Oberlander T, Synnes A, Brant R. Calmer: a robot for managing acute pain effectively in preterm infants in the neonatal intensive care unit. *PAIN Reports*. 4(2):e727.

Controlled group use non-traditional methods (n=2):

1. Jeong S, Breazeal C, Logan D, Weinstock P. Huggable: Impact of embodiment on promoting verbal and physical engagement for young pediatric inpatients. In: 2017 26th IEEE International Symposium on Robot and Human Interactive Communication (RO-MAN) [Internet]. 2017 [cited 2024 Aug 18]. p. 121–6. Available from: <https://ieeexplore.ieee.org/abstract/document/8172290>
2. Beraldo G, Menegatti E, de Tommasi V, Mancin R, Benini F. A preliminary investigation of using humanoid social robots as non-pharmacological techniques with children. In: 2019 IEEE International Conference on Advanced Robotics and its Social Impacts (ARSO) [Internet]. 2019 [cited 2024 Aug 18]. p. 393–400. Available from: <https://ieeexplore.ieee.org/abstract/document/8948760>

Study protocol (n=1):

1. University of Nebraska. Robot Rehab: AAI With Robot During Inpatient Pediatric Rehab [Internet]. 2024 [cited 2024 Aug 18]. Available from: <https://clinicaltrials.gov/study/NCT05275543>

Review (n=2):

1. Cho MK, Choi MY. Effect of Distraction Intervention for Needle-Related Pain and Distress in Children: A Systematic Review and Meta-Analysis. *International Journal of Environmental Research and Public Health*. 2021 Jan;18(17):9159.
2. Trost MJ, Ford AR, Kysh L, Gold JI, Matarić M. Socially assistive robots for helping pediatric distress and pain: A review of current evidence and recommendations for future research and practice. *Clin J Pain*. 2019 May;35(5):451–8.