

**Supplementary file number 2 (S2): Overview of included studies.**

Study (Author, Year, Country)	Population	Setting	Intervention	Outcome measured	Results	Outcome assessment
Randomised Controlled Trials						
Burns-Nader ES, 2011, USA  (10)	Children aged 5.5 – 12 years	Paediatric clinic	3 intervention groups:  1. Medical play group (doll and authentic medical equipment)  2. Medical information video group  3. Typical play group	1. Children's anxiety level  2. Children's level of fear  3. Children's distress behaviours	<ul style="list-style-type: none"> <li>No effect of types of activity on children's anxiety level</li> <li>Medical play group had increased level of fear after the activity and after doctor's visit</li> <li>Medical play group was more difficult (higher mean score in nurses' overall rating of difficulty) during triage procedure as compared to medical information video group, typical play group and control group.</li> </ul>	Self-report  Self-report  Third-party evaluation

			Control: viewed video on safari life			
Burns-Nader S, 2013, USA (11)	Children aged 5.5 – 12 years	Paediatric clinic	<p>3 intervention groups:</p> <ol style="list-style-type: none"> <li>1. Medical play group (doll and authentic medical equipment)</li> <li>2. Medical information video group</li> <li>3. Typical play group</li> </ol> <p>Control: viewed video on safari life</p>	<p>1. Children's mood</p> <p>2. Children's behaviours during procedures</p>	<ul style="list-style-type: none"> <li>• Medical play lowered children's mood after the activity and after the doctor's visit</li> <li>• Medical play group was more difficult (higher mean score in nurses' overall rating of difficulty) during triage procedure as compared to medical information video group, typical play group and control group.</li> </ul>	<p>Self-report</p> <p>Third-party evaluation</p>
Brown JC, 2012, USA (9)	Children aged 3 - 5 years	Paediatric clinic	<p>Medical collage group (medical play)</p> <p>Control: No intervention</p>	<p>1. Children's behaviours:</p> <ul style="list-style-type: none"> <li>- State</li> <li>- Affect</li> <li>- Activity</li> <li>- Vocalisation</li> </ul>	<ul style="list-style-type: none"> <li>• Medical collage (medical play) group was more alert, and had more activity and more vocalizations after the intervention. Levels of activity and vocalization went back down after doctor's visit</li> </ul>	<p>Third-party evaluation</p>

				- Fidgeting/Squirming		
				2. Children's feelings		Self-report
Non-randomised trials with controlled group						
Leonhardt C, 2014, Germany (5)	Children aged 4.5 - 5.5 years	Kindergarten	TBH  Control: No intervention	Children's medical knowledge	<ul style="list-style-type: none"> <li>Children in TBH group had better knowledge than the control group one week after the intervention</li> </ul>	Self-report
Bloch YH, 2008, Israel (6)	Children aged 3 – 6.5 years	TBH at healthcare centre	TBH  Control: No intervention	Children's anxiety about hospitalisation	<ul style="list-style-type: none"> <li>Children in TBH group had lower levels of anxiety than the control group one week after the intervention</li> </ul>	Self-report
Pontes JE, 2015, Brazil (12)	Children aged 3 - 6 years and 11 months	Paediatric clinic	Instructional therapeutic play (medical play)  Control: No intervention	<ol style="list-style-type: none"> <li>Children's body movement during procedure</li> <li>Children's verbal expression during procedure</li> <li>Children's emotional expression during procedure</li> </ol>	<ul style="list-style-type: none"> <li>Instructional therapeutic play (medical play) group had greater acceptance of the procedure as compared to control group: <ul style="list-style-type: none"> <li>- Staying still</li> <li>- Collaborating</li> <li>- Smiling</li> <li>- Being at ease</li> </ul> </li> </ul>	Third-party evaluation

Pre-post Studies						
Ottenheim M, 2018, Netherlands (13)	Children aged 4 - 7 years	TBH at healthcare centre	TBH	<ol style="list-style-type: none"> <li>1. Children's attitude towards visiting a hospital</li> <li>2. Children's attitude towards doctors</li> <li>3. Children's attitude towards falling ill</li> <li>4. Children's attitude towards hospitals</li> </ol>	<ul style="list-style-type: none"> <li>• Reduced anxiety level towards doctors after TBH</li> <li>• Reduced anxiety level towards falling ill after introductory lesson and after TBH</li> </ul>	Self-report
Ong L, 2018, Singapore (14)	Children aged 5 - 8 years	TBH at kindergarten and primary schools	TBH	<ol style="list-style-type: none"> <li>1. Childhood feelings towards healthcare services</li> <li>2. Willingness of health-seeking behaviour</li> <li>3. Children's medical knowledge</li> </ol>	<ul style="list-style-type: none"> <li>• Children's feeling of happiness towards visiting the doctor increased after TBH</li> <li>• Children who felt happy to visit the hospital increased after TBH</li> <li>• Increased healthcare knowledge after TBH</li> </ul>	Self-report
Dalley JS, 2016, Canada (15)	Children aged 5 - 10 years	TBH at healthcare centre	TBH	<ol style="list-style-type: none"> <li>1. Children's level of fear</li> <li>2. Children's level of expected pain</li> <li>3. Children's coping strategies</li> </ol>	<ul style="list-style-type: none"> <li>• No effect on level of fear</li> <li>• Decreased mean expected pain ratings after TBH</li> <li>• Higher frequency of intervention-taught coping strategies after TBH</li> </ul>	Self-report

Victorine A, 2002, UK  (7)	Children aged 2 – 12 years	TBH at hotel	TBH	1. Children's attitude towards doctor  2. Children's attitude towards hospital	<ul style="list-style-type: none"> <li>Increased proportion of children with positive feelings towards doctor and hospital after TBH</li> </ul> <p><i>*No further test was done to determine whether results were statistically significant</i></p>	Self-report
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A summary of the author, year of publication, country of publication, population, setting, intervention, outcome measured, results and outcome assessment of each included studies.