

# A Short Screening Tool for Child Physical and Sexual Abuse - HITSS

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## PedHITSS Tool

Please read the following and **put a checkmark** in the box to show how often an immediate family member has done the following to a child in the last year. Please do not sign or put your name on this survey.

During the <b>last year</b> , how often would you <b>estimate</b> that an immediate family member did each of the following to a child.	Rarely (1)	Sometimes (2)	Fairly often (3)	Frequently (4)	Never (0)
Physically <b>HURT</b> him/her					
<b>INSULT</b> him/her or Talk down to him/her					
<b>THREATEN</b> him/her with physical harm					
<b>SCREAM</b> or Curse at him/her					
Forced him/her to have <b>SEX</b>					

## Introduction

- Approximately 25.6% of U.S. children experience abuse in their lifetime,<sup>1</sup> and 2.36 deaths per every 100,000 children are attributable to abuse or neglect.<sup>2</sup>
- However, healthcare providers fail to screen for abuse at rates sufficient to detect or preempt events.<sup>3</sup>
- This study examines the **psychometric properties and diagnostic accuracy** of a brief screen for child abuse, the Pediatric Hurt-Insult-Threaten-Scream-Sex (PedHITSS) tool.

## Introduction

- There were 676,000 victims of child abuse and neglect reported to child protective services (CPS) in 2016.
- A non-CPS study estimated that 1 in 4 children experience some form of child abuse or neglect in their lifetimes and 1 in 7 children have experienced abuse or neglect in the last year.
- About 1,750 children died from abuse or neglect in 2016.
- The total lifetime economic cost of child abuse and neglect is estimated at \$124 billion each year.
- <https://www.cdc.gov/violenceprevention/childabuseandneglect/index.html>



## Spanking Harms Children - AAP

- ORLANDO, FLA – Corporal punishment – or the use of spanking as a disciplinary tool –increases aggression in young children in the long run and is ineffective in teaching a child responsibility and self-control.
- In fact, new evidence suggests that it may cause harm to the child by affecting normal brain development.
- Other methods that teach children right from wrong are safer and more effective.

## Objectives

- Describe a new pediatric child abuse screening tool for use in primary care settings
- Identify the psychometric Results
- Evaluate applicability of the PedHITSS for clinical practice

## Methods

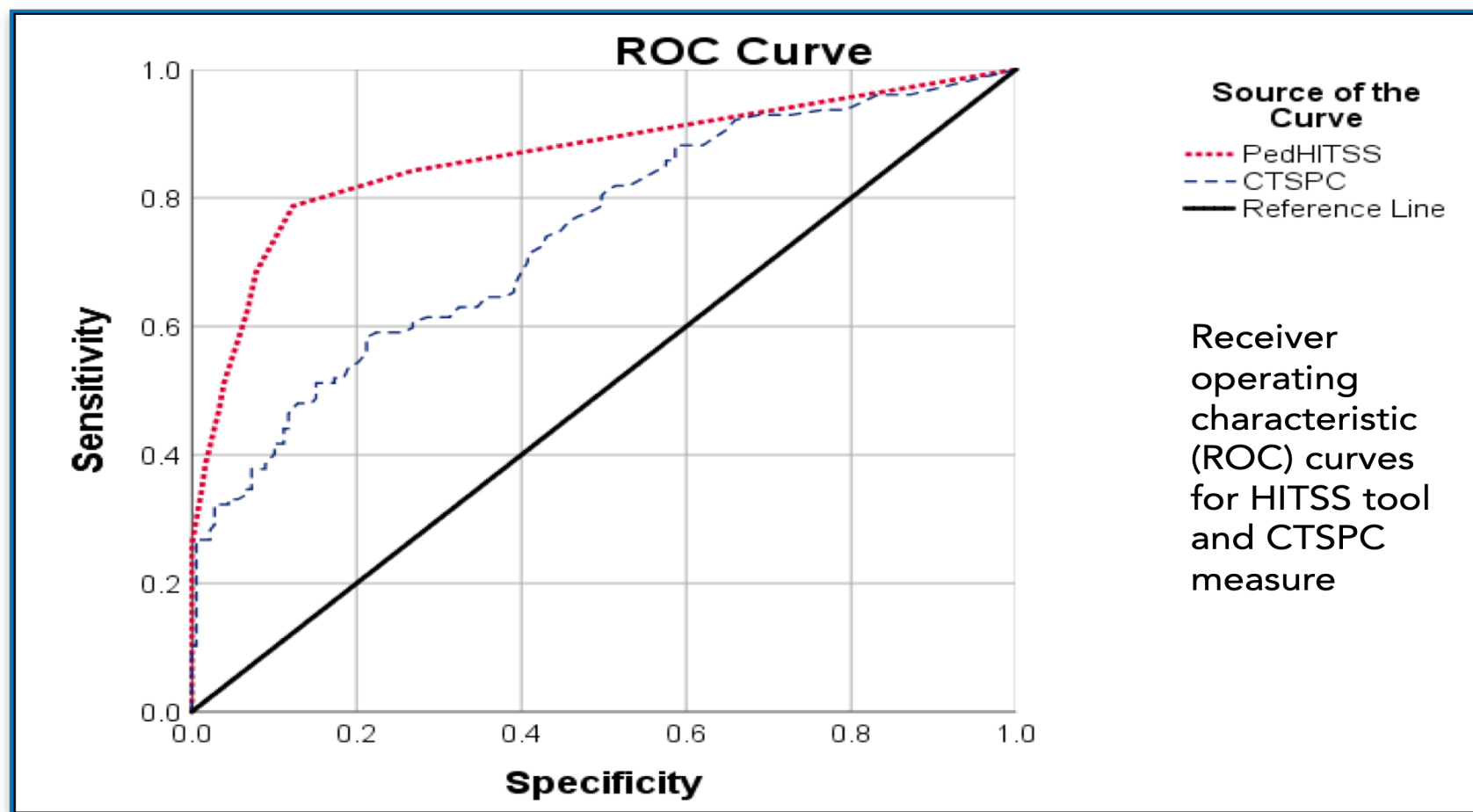
Data were collected between 2014 and 2017 from parents and guardians of pediatric patients (0-12 years old)

Participants completed assessments during a medical visit or, specific to abused subsample, after a counseling appointment

### **Data analyses:**

- Reliability: Cronbach's  $\alpha$
- Convergent and discriminant validity: Pearson's  $r$
- Construct validity: Factor analysis, Kaiser-Meyer-Olkin measure of sampling adequacy, Bartlett's test of sphericity, shared variance across scale items ( $h^2$ ), exploratory factor analysis (EFA), confirmatory factor analysis (CFA)
- Specificity & sensitivity: Receiver operating characteristic (ROC) curve

## Receiver operating characteristic (ROC) curves for PedHITSS tool and CTSPC measure



## Study Sample

Characteristics	Total (n=422), No. (%)	Abused (n=180), No. (%)	Non-abused (n=242), No. (%)
<b>Parents/Guardians</b>			
Age	$M = 33.5, SD = 8.5$		
Language of Survey			
English	338 (80.1)	161 (89.4)	177 (73.1)
Spanish	84 (19.9)	19 (10.6)	65 (26.9)
Sex			
Female	380 (90.0)	173 (96.1)	207 (85.5)
Male	37 (8.8)	5 (2.8)	32 (13.2)
Race/Ethnicity			
Hispanic	194 (46)	62 (34.4)	132 (54.5)
White	85 (20.1)	38 (21.1)	47 (19.4)
Black	116 (27.5)	72 (40)	44 (18.2)
Asian	18 (4.3)	3 (1.7)	15 (6.2)
Other/Mixed	6 (1.4)	4 (2.2)	2 (0.8)
<b>Children</b>			
Age	$M = 5.8, SD = 3.8$		
Sex			
Female	204 (48.3)	94 (52.2)	110 (45.5)
Male	214 (50.7)	85 (47.2)	129 (53.3)

## Results

### **Reliability**

- CTSPC and PedHITSS have high internal consistency for both the non-abused and abused subsamples

### **Convergent and Discriminant Validity**

- The CTSPC (24-item) and PedHITSS scale totals were strongly correlated ( $r = .70, p < .01$ ).

### **Construct Validity**

- Exploratory Factor Analysis (EFA): One-factor model: Eigenvalue = 3.15. Accounted for 63% of the variance of the five items (model fit:  $X^2(5) = 25.78, p < .01$ ) Two-factor model: Second factor, Eigenvalue = .93. Accounted for 82% of the variance.
- Confirmatory Factor Analysis (CFA): Two clusters of items ( $X^2 = 1.76, p = .185$ ): (1) insult, threaten, and scream, and (2) hurt and, to a much lesser extent, sexual abuse. Model was non-significant: one-factor solution is preferable.

## Results

### Specificity and Sensitivity

- The PedHITSS **performed superior to the CTSPC in accurately determining participant group membership** (i.e., non-abused versus abused)
- Findings indicate that **any positive answer ( $\leq 1$ ) on the PedHITSS maximizes sensitivity** while also demonstrating good specificity
- The optimal PedHITSS cutpoint is 1, indicating that in either scoring method, a positive answer on any item requires physician follow-up
- Further, **100% of the sample is correctly classified at a PedHITSS score of 8.5**

## Sensitivity and Specificity for the PedHITSS with and without sex items

	Score	Sensitivity	Specificity
<b>PedHITSS (With sex item)</b>	0.5	0.84	0.73
	1.5	0.78	0.86
	2.5	0.67	0.91
	3.5	0.60	0.92
	4.5	0.50	0.95
<b>PedHITSS (Dichotomous scoring with sex item)</b>	0.5	0.84	0.72
	1.5	0.68	0.87
	2.5	0.52	0.93
	3.5	0.34	0.96
	4.5	0.05	0.99
<b>PedHITSS (Without sex item)</b>	0.5	0.83	0.72
	1.5	0.77	0.85
	2.5	0.67	0.89
	3.5	0.60	0.91
	4.5	0.50	0.94
<b>PedHITSS (Dichotomous scoring without sex item)</b>	0.5	0.83	0.72
	1.5	0.67	0.87
	2.5	0.52	0.93
	3.5	0.33	0.97



## References

- Finklehor D, Turner H, Shattuck A, Hamby S, Kracke K. Children's exposure to violence, crime, and abuse: an update. Rockville, MD: Office of Juvenile Justice and Delinquency Prevention, U.S. Department of Justice; 2015.
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- 3. Nygren P, Nelson HD, Klein JD. Screening children for family violence: a review of the evidence for the US Preventive Service Task Force. *Annals of Fam Med*. 2004;2(2):161-9.