

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

Amer Shakil, MD, MBA, Philip G. Day, PhD, Jessica Chu, MPH, Sarah B. Woods, PhD, Kate Bridges

Department of Family and Community Medicine
UT Southwestern Medical Center, Dallas TX

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 last year , how often would you estimate 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 HURT him/her					
INSULT him/her or Talk down to him/her					
THREATEN him/her with physical harm					
SCREAM or Curse at him/her					
Forced him/her to have SEX					

Introduction

- Approximately 25.6% of U.S. children experience abuse in their lifetime,¹ and 2.36 deaths per every 100,000 children are attributable to abuse or neglect.²
- However, healthcare providers fail to screen for abuse at rates sufficient to detect or preempt events.³
- 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

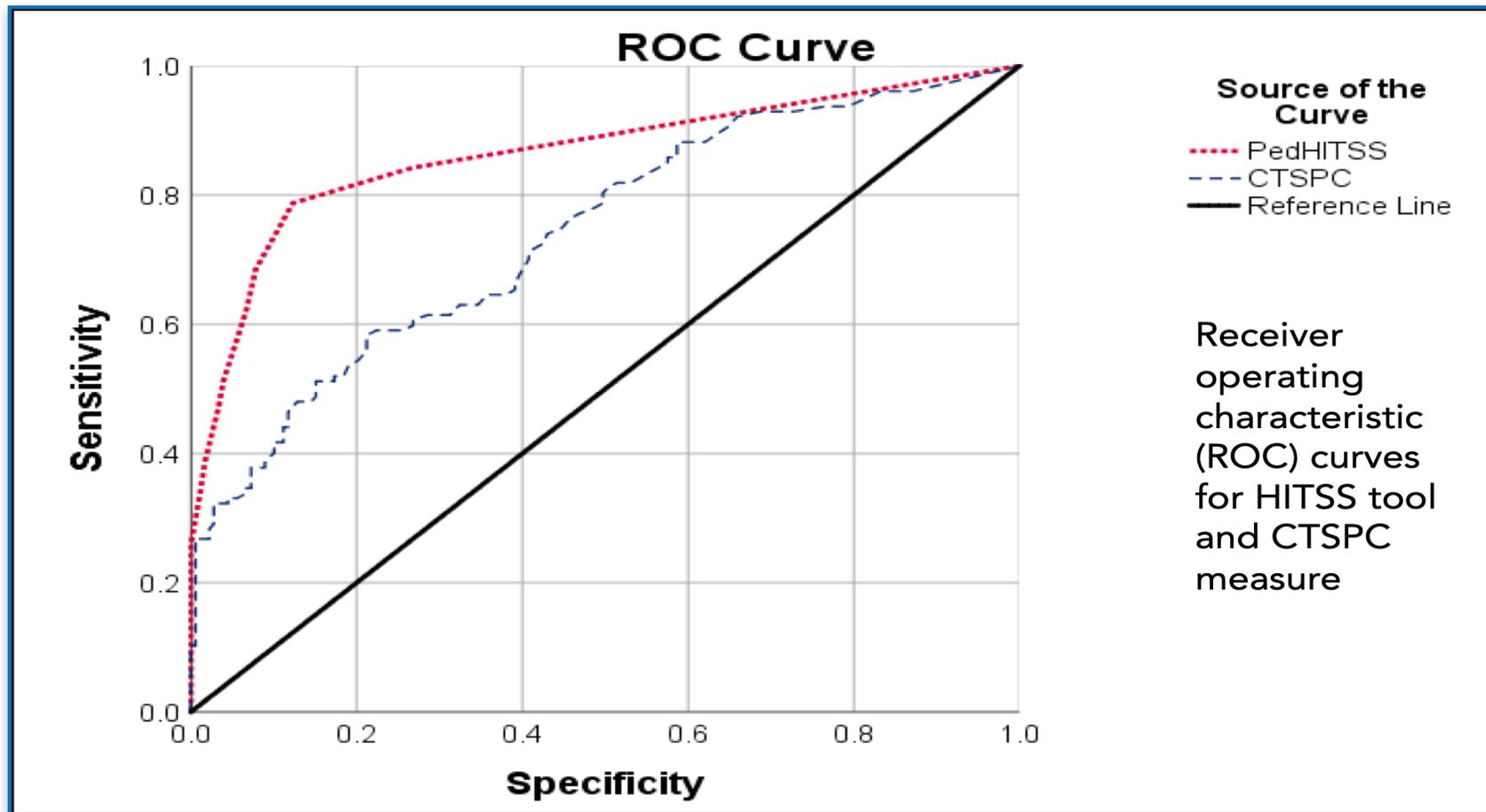
Data were collected between 2014 and 2017 from parents and guardians of pediatric patients (0-12 years old)

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

Data analyses:

- Reliability: Cronbach's α
- 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. (%)
Parents/Guardians			
Age	<i>M</i> = 33.5, <i>SD</i> = 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)
Children			
Age	<i>M</i> = 5.8, <i>SD</i> = 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: $\chi^2(5) = 25.78, p < .01$) Two-factor model: Second factor, Eigenvalue = .93. Accounted for 82% of the variance.
- Confirmatory Factor Analysis (CFA): Two clusters of items ($\chi^2 = 1.76, p = .185$): (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 (≤ 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
PedHITSS (With sex item)	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
PedHITSS (Dichotomous scoring with sex item)	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
PedHITSS (Without sex item)	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
PedHITSS (Dichotomous scoring without sex item)	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.