

In-home Education Enhances Shaken Baby Syndrome Knowledge in High-Risk Parents

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INTRODUCTION

- Shaken Baby Syndrome (SBS) has been linked to a myriad of developmental and health issues: brain damage, blindness, seizures, paralysis, hearing loss, learning disabilities, mental retardation, behavioral issues, cerebral palsy, anxiety, substance abuse and even death (NIH, 2016; CDC, 2016; Mayo Clinic, 2016).
- Factors increasing SBS range from financial burdens to substance abuse (NINDS, 2016).
- The current study examined the impact of an SBS education program on impoverished prenatal mothers with a variety of risk factors.

METHOD

- Archival data from a homegrown health care coordination program, which targets impoverished medically underserved children and their families, was obtained.
- 224 at-risk prenatal mothers received in-home education on SBS.
- Mothers were 43.3% African American, 18.3% Hispanic, and 36.6% Caucasian.

Maternal Risk Factors	
Poverty	100%
Previous Child Abuse	24.1%
Mental Health Diagnosis	47.3%
Homelessness	9.4%
Substance Use	12.9%
Medical Condition	63.8%
Clinical Depression	18%
CPS referral	8%
< HS education	41.5%
English Language Learner	17.4%

METHOD

- All participants were shown a doll used to exemplify the impact of SBS on the brain.

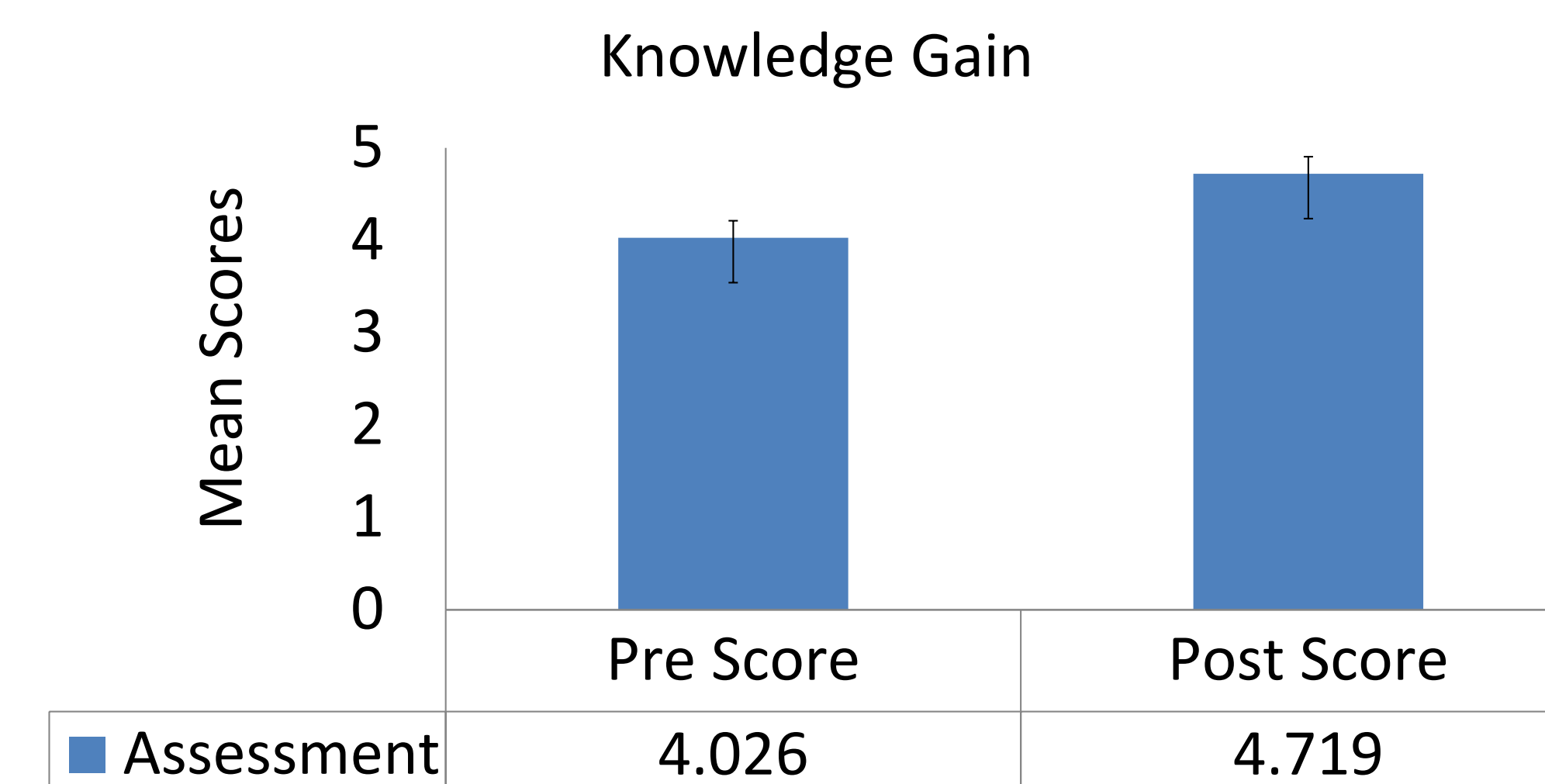


- All participants received educational pamphlets in their native language on SBS.
- Approximately half of the participants (43.5%) also viewed an 8.5 minute educational video on SBS (HVSBP, 2012): <https://www.youtube.com/watch?v=m9m5KwvX0pQ>.
- Participants experienced between 1-7 educational touchpoints ($M=2.009$, $SD=1.035$).
- A 5-item test was used to assess knowledge. Pre-test scores ranged from 1-5 ($M=3.986$, $SD=.883$). Post-test scores ranged from 2-5 ($M=4.731$, $SD=.623$).
- 114 prenatal mothers completed both the pre and post survey. Time between pre-post assessment spanned from 1-9 months ($M=2.646$, $SD=1.989$).

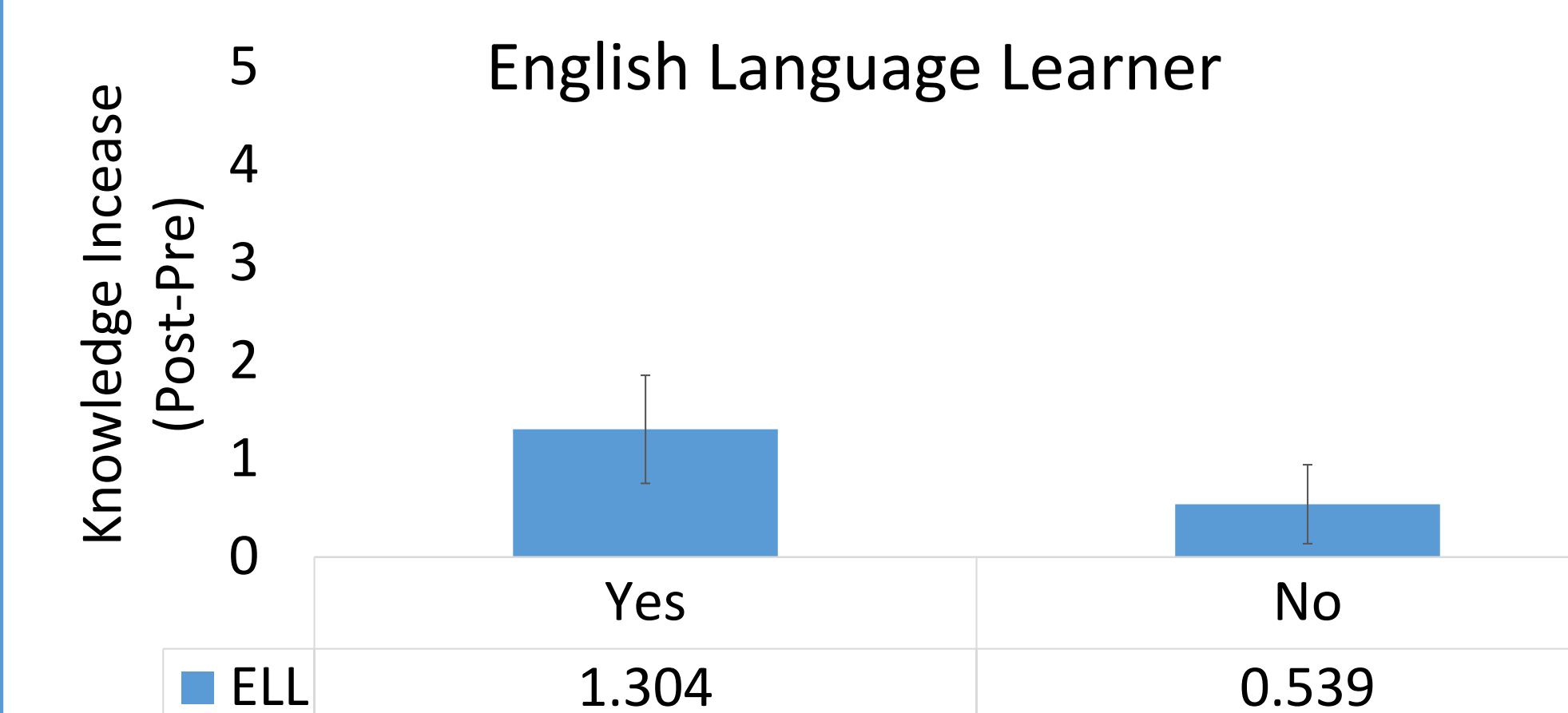
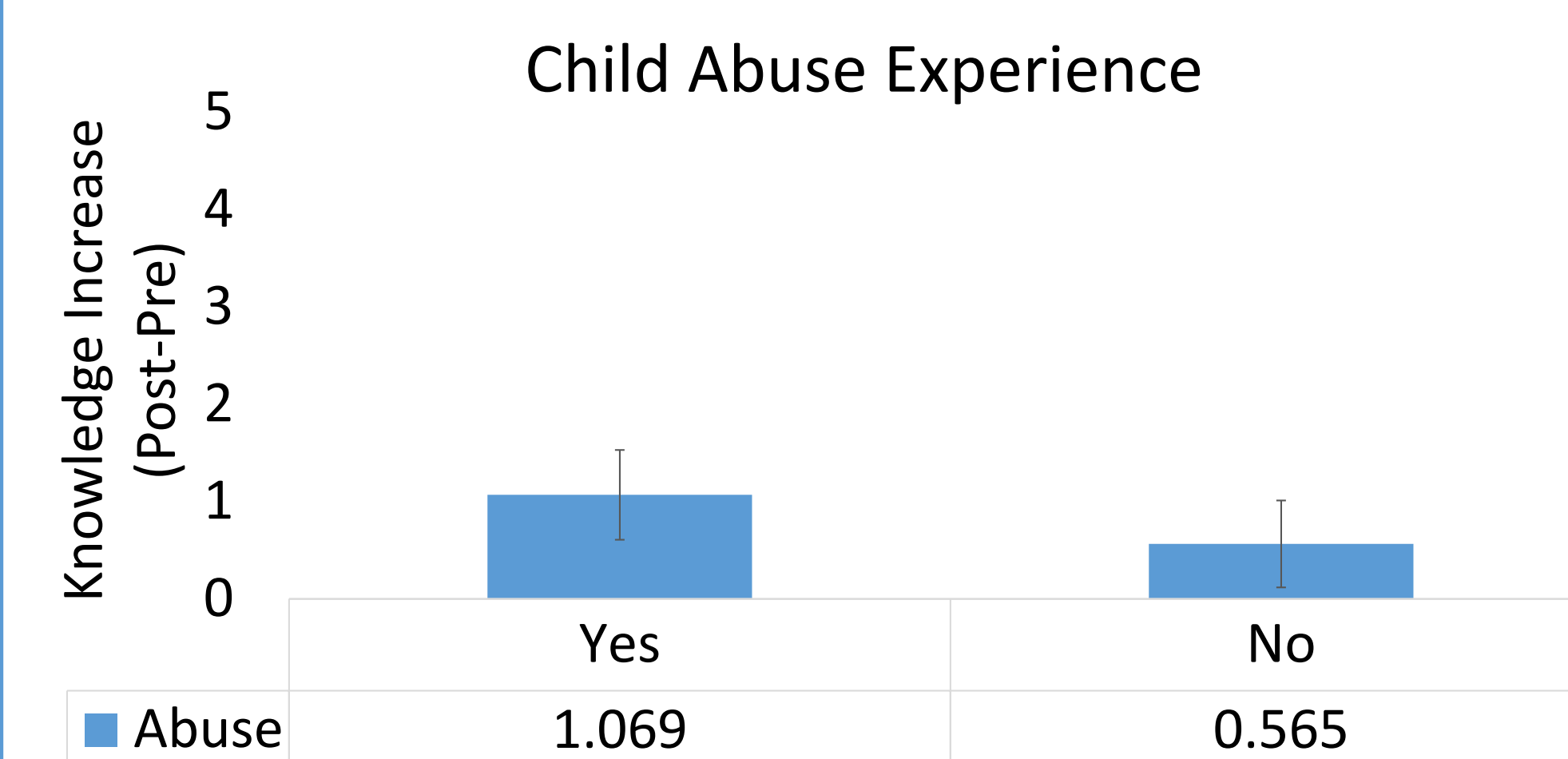
RESULTS

- A paired samples t-test showed knowledge increased significantly from pre-test ($M=4.026$, $SD=.867$) to post-test ($M=4.719$, $SD=.617$), $t(113)= 8.017$, $p<.001$, $eta^2=.363$.
- Differences in pre-post knowledge gain contingent on risk factors were also examined.

RESULTS CONT.



- There were no differences in knowledge gain based on mental health diagnosis, clinical depression symptomology, homelessness, referral source, education, medical condition presence, or substance use.
- Those who reported previous child abuse experience showed a greater increase in knowledge ($M=1.069$, $SD=.923$) than those who did not ($M=.565$, $SD=.892$), $F(1,112)=6.785$, $p=.010$, $eta^2=.057$.
- Additionally, ELL mothers showed a greater increase in knowledge ($M=1.304$, $SD=1.105$) than monolingual mothers ($M=.539$, $SD=.807$), $F(1,112)=14.110$, $p<.001$, $eta^2=.112$.



RESULTS CONT.

- Greater pre-post score increases were positively correlated with multiple ASQ scale scores at 6 months and with communication scores at 12 months ($r's>.341$, $p's<.037$) but not related to number of children born to that mother ($p>.05$).
- Maternal self-report of depression during pregnancy and postpartum depression symptoms were unrelated to performance.

DISCUSSION

- Focus groups with nurses providing the training indicate that the doll exhibition is particularly effective as the mother can see the brain bounce off the skull during the shaking and hear the distressed cry. "This makes shaking and its effects real to the mom."
- Most mothers refuse to shake the doll, preferring the nurse perform the exhibition.
- The video was considered compelling by the nurses but was likely muted by use of the doll.
- Results indicated that this form of SBS education is effective for increasing knowledge in impoverished prenatal moms with a variety of risk factors. Knowledge increase was moderate at 36%.
- Knowledge increase was greatest for ELL's and those who had experienced abuse previously.

COLLABORATORS

