



Considering Culture in Autism Screening: A Cultural & Linguistic Competence Training Curriculum for Pediatric Providers



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Problem: Children with ASD from diverse cultural and linguistic backgrounds remain significantly less likely to be identified for evaluation and services and are also diagnosed at later ages than children from English-speaking families.

Purpose: To address this gap, the project team developed, implemented, and evaluated a training module for pediatric providers in culturally competent screening, evaluation, and referral for children at risk for ASD.

Hypotheses: Training will result in significant gains in a) basic knowledge, b) applied knowledge, and c) attitude and will demonstrate post-test satisfaction.

- Methods:**
- Pilot study in 2 Boston Hospitals; convenience sample of 45 pediatric residents and medical students
 - Given culturally competent ASD screening training
 - Within-participant (repeated measures) study design
 - Pre- and post-test assessments on knowledge gain and attitudinal changes to test hypotheses.



- Curriculum Components:**
- **Facilitator Guide** with discussion-based content
 - **Flexible content** of 30-, 60-, 90-, or 120-minutes
 - **Video library** features interviews from 4 cultures
 - **Two case-based presentations** illustrating potential barriers with up to 12 videos embedded
 - **Resource handouts** include fact sheets & glossary
 - **Video grid** for easy access to videos

Results

Demographics	
Participants (n=45)	Tufts Medical Center (56%) Boston Medical Center (44%)
Profile	Pediatric Residents (82%), Medical Students (16%), Med-Peds Residents (2%)
Racial/ethnic background	White (67%), Asian (13%), Latino (9%), Black (4%), Native Hawaiian or Other Pacific Islander (2%), Multi-racial (4%)
Post-graduate training year	1st year (63%), 2nd year (13%), 3rd year (21%), 4th year (3%)
Planned careers	Pediatric Subspecialist (56%), Primary Care Pediatrician (13%), Family Medical Practitioner (2%), Undecided/other plans (29%)

- **Comparison of Pre- & Post-Test Scores:**
 - **Hypothesis 1: Significant gain in basic knowledge.**
 - An increase of 12% supports the research hypothesis (from 74% pre- to 86% post. Statistically significant at $p = < .0001$, with an effect size of .98).
 - **Hypothesis 2: Improvement in applied knowledge.**
 - An increase of 8% pre to post-test shift at $p = < .09$ (73% pre- to 81% post. with an effect size of .35).
 - **Hypothesis 3: Significant gain in participant attitudes**
 - The positive shift in attitude was present and statistically significant for all attitude questions ($p < .0001$).
 - **Satisfaction:** The mean satisfaction score across questions was 4.15 on increasing Likert scale of 1-5, indicative of overall satisfaction.
- **Pre-test Level Knowledge Gains:**

Pre-test score:	< 60%	60-80%	> 80%
Basic Knowledge gains	27%	13%	2%.
Applied Knowledge gains	50%	16%	-19%



Special Topics

From parent interviews (e.g., maternal blame and stigma, family and community barriers, immigrant status, and community partners):

Language concerns	Two languages, reluctance to speak up
Frequent barriers	Interpreter availability, language differences, limited access to care, etc.
Use of interpreters	Minimize ad hoc use, never use a child, focus on family
Tool usage	Check proper language, check origin of interpreter
Cultural liaison	Bilingual vs. bicultural, assist with cultural barriers
Family & community stigma	Traditional approaches, abuse vs. treatment
Immigration status	Fear of deportation & separation from family
Community partners	Early childhood educators, Early Intervention

Discussion

The results successfully demonstrated the feasibility and benefit of the training curriculum. The four cross-cultural video interviews yielded valuable, nuanced information for the training content. The positive attitude change is important because gains in knowledge and applied knowledge are insufficient alone; changing attitudes of the importance of screening is imperative. The pretest level analysis has important implications of cost/benefit analysis for intervention dissemination, as an online pre-test could be given to determine which subjects would most likely benefit from the training intervention.

Future Directions

- Roll-out of training to larger statewide & national pediatric provider audience
- Interactive online distance learning modules
- Expansion to other special topics related to screening
- CDC review of curriculum for possible inclusion as an Autism Case Training (ACT) module

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