**A Systematic Review of Functional Analyses Trainings** Victor Ramirez, Ellie Kazemi, and Vahe Esmaeili California State University, Northridge

CalABA February 11th, 2017

* Functional analysis methodology is

# Introduction

* + The most valid method of determining the underlying cause of problem behavior (Hanley, Iwata, & McCord, 2003)
  + Considered best practice for identifying function of problem behavior (Beaver, Iwata, & Lerman, 2013)
  + Evidenced to produce better treatment outcomes (Campbell, 2003)
* Skills required to complete a functional analysis
  + Designing
  + Implementing
  + Collecting data
  + Graphing
  + Interpreting results
  + Dealing with undifferentiated results
  + Selecting function-based intervention
* Some expertise is required

# Purpose

Conducted a systematic review to determine what we currently know about training individuals to use functional analysis methodology

* Search Criteria
  + Search engine: PsycINFO o Search date: April 28, 2016 o Peer reviewed
  + English
  + Keywords
  + functional analys\*
  + train\* OR teach\*

# Method

* + staff\* OR teacher\* OR parent\* OR caregiv\* OR practitioner\* OR student
* A total of 395 articles
* Inclusion criteria
  + Trained participants to utilize any functional analysis component skill

 (e.g., designing, graphing, selecting function-based interventions)

* Out of 395 articles:
  + 31 articles
* Two independent reviewers
  + Reviewed all 395 articles
  + 100% agreement on 31 articles to include
* Data Collection
  + Categorized:

 Characteristics of participants

 Functional analysis component skills trained

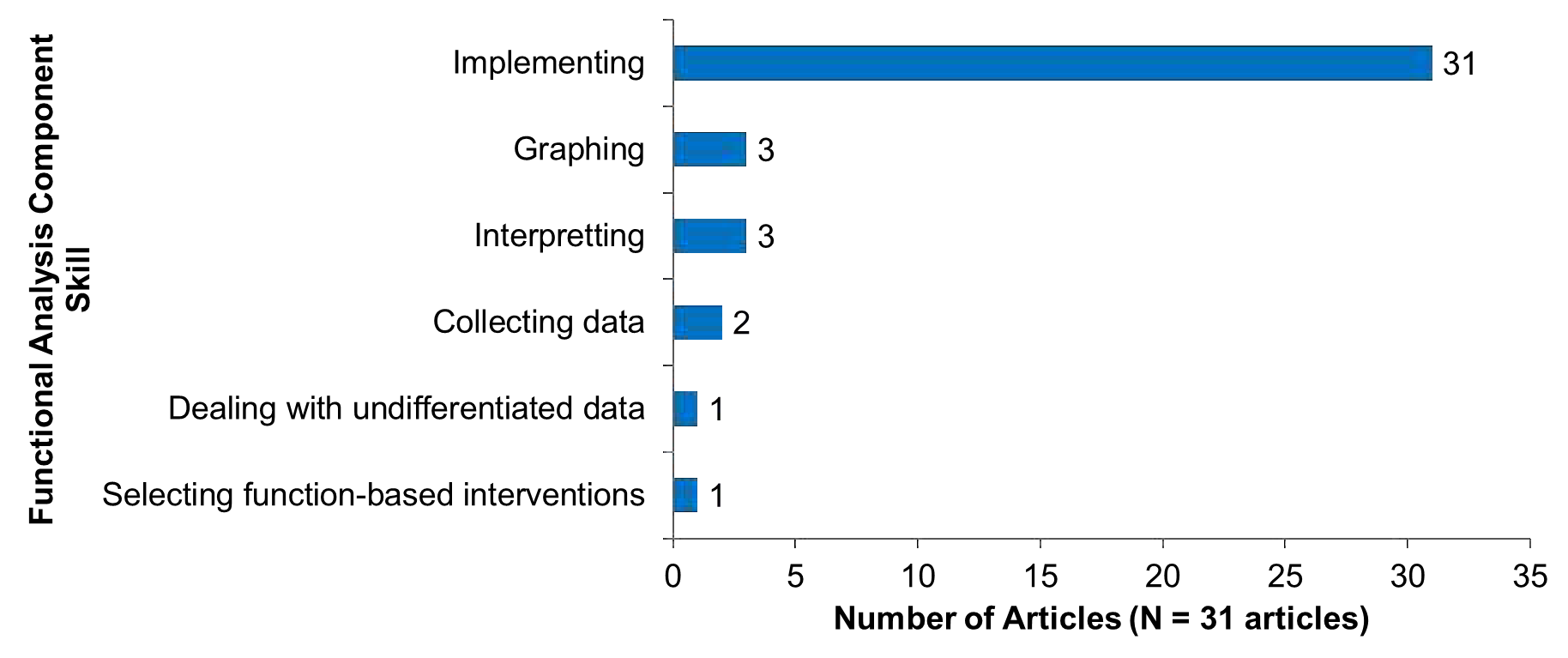
 Number of participants who met mastery

 Average training time per participant

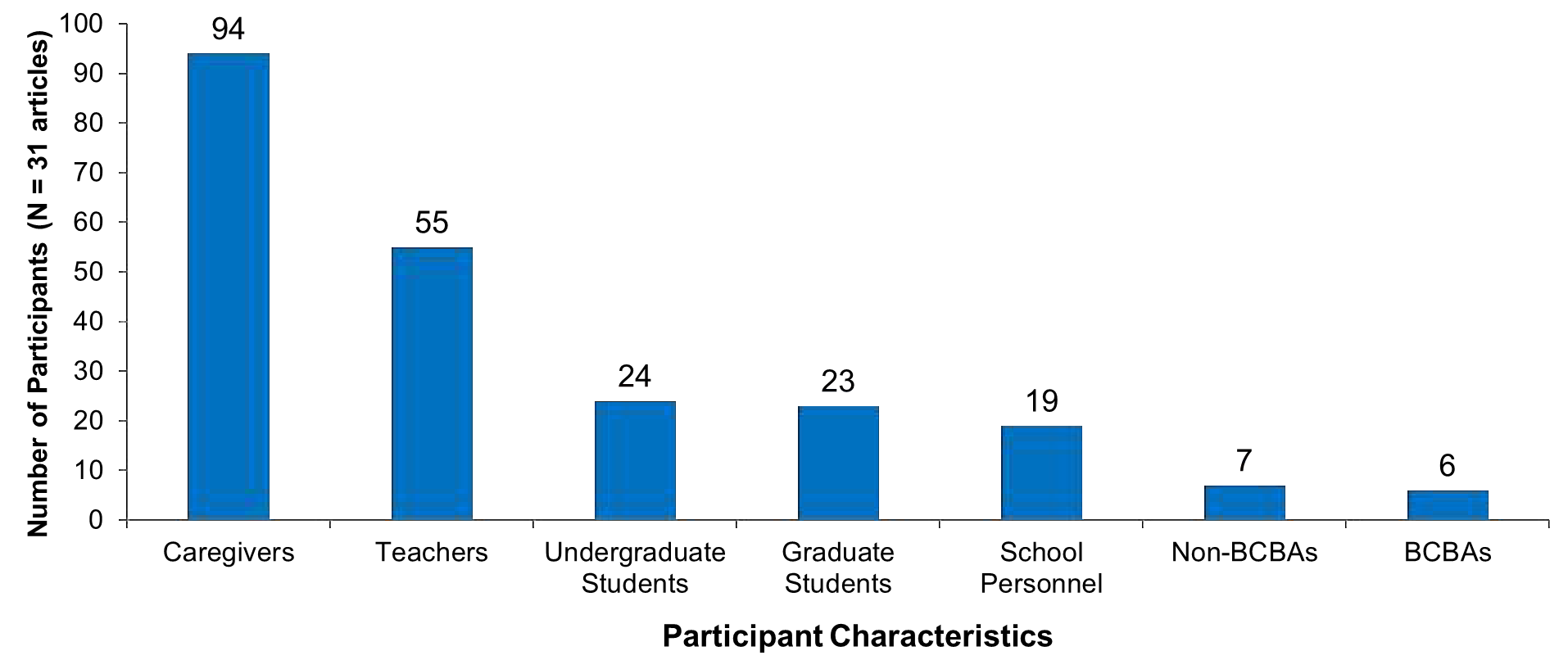
* + - (Package training time) + (Average session time)
* Interobserver agreement
  + Reviewed 39% of articles
  + 95% agreement on information categorized (range of 85%-100%)

# Results

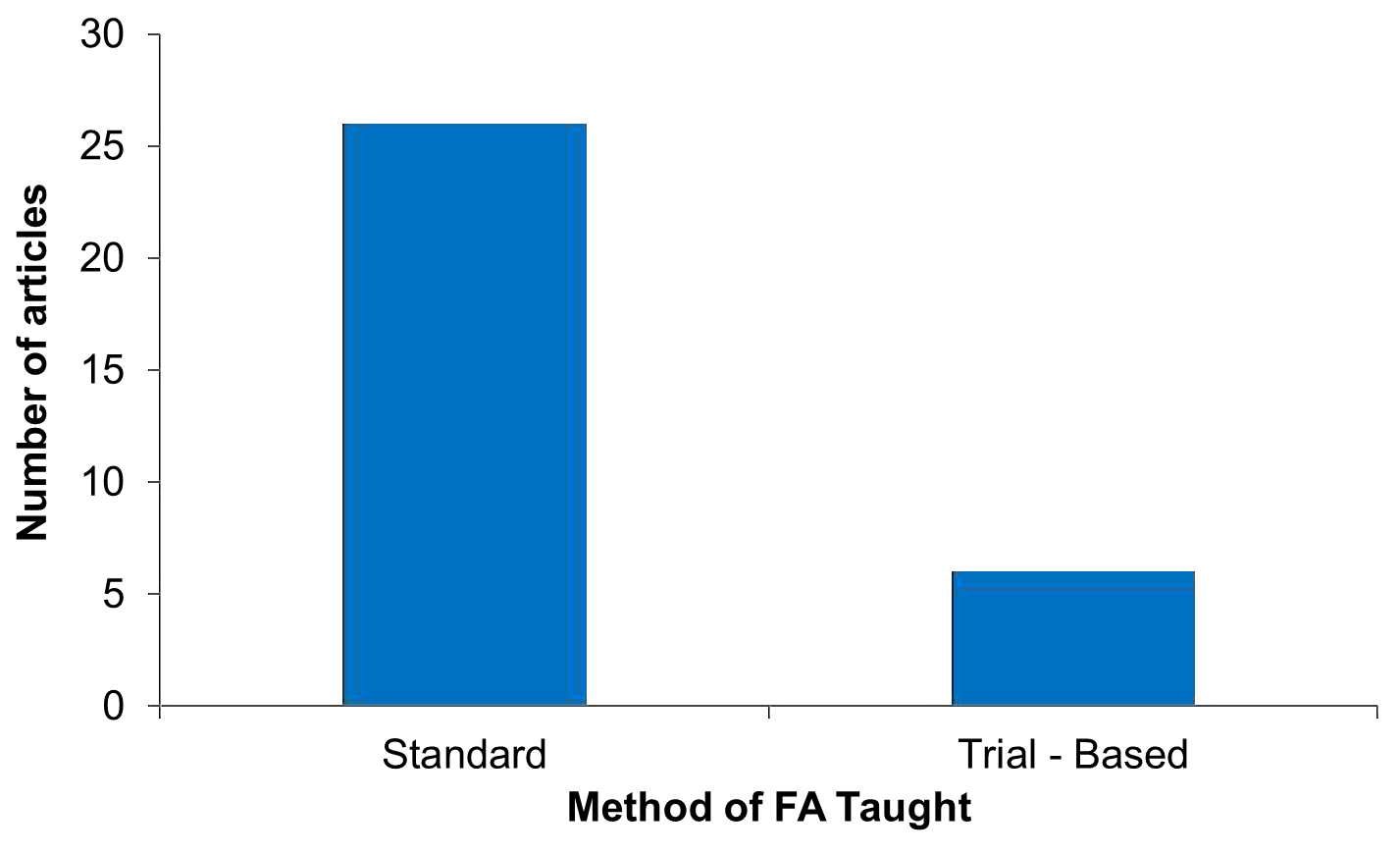
* FA Component Skills Trained



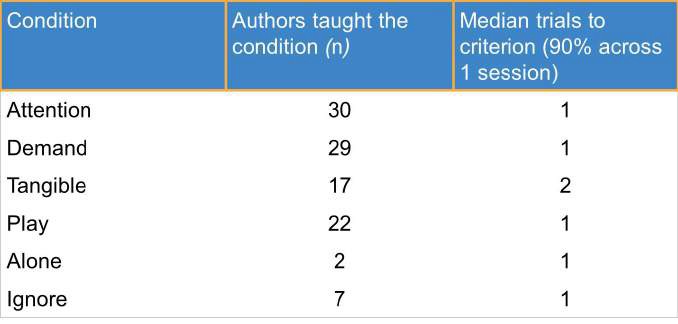
* Participant Characteristics



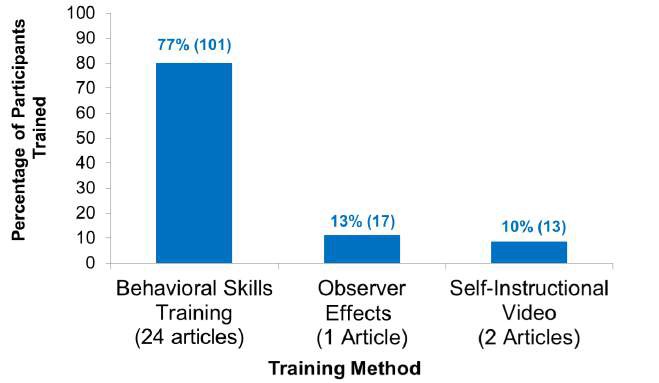
* Method of FA Taught



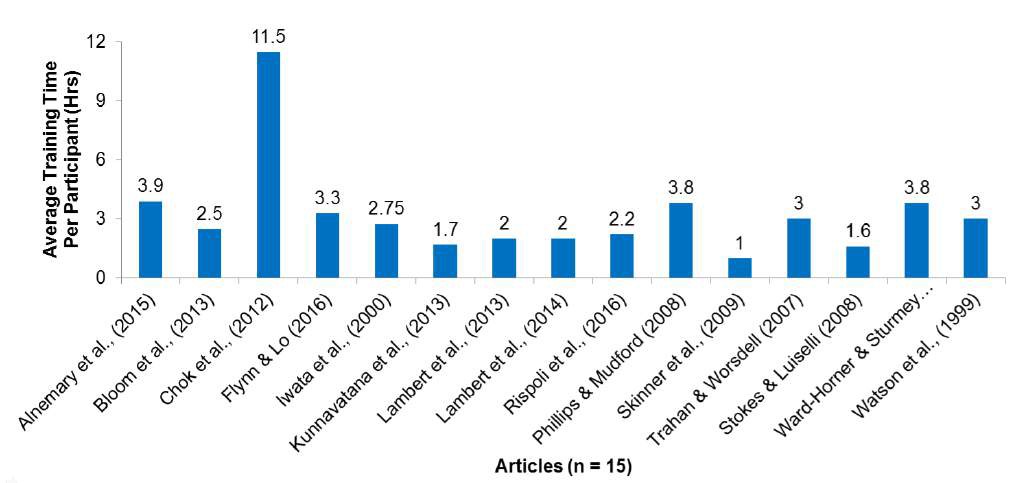
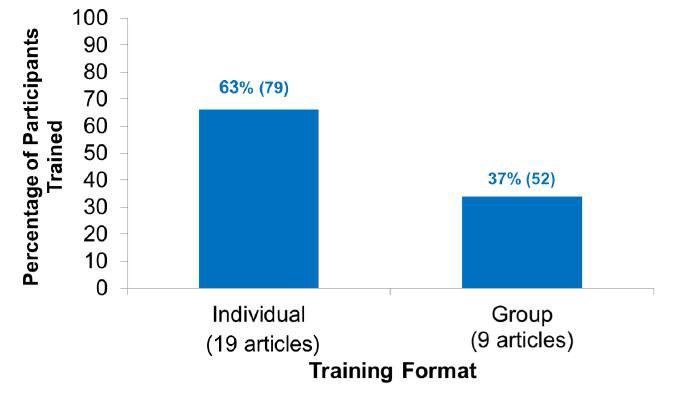
* Conditions trained & median trials to criterion



* Training Method (n = 131 participants)



* Training Format (n = 131 participants)



* Average Training Time per Participants

# Conclusions

* + Implementation can be trained in a short period of time
  + Individuals can learn implementation without prior knowledge of FAs
  + Many different individuals have been taught how to implement FAs successfully
  + Behavioral skills training has been established as an effective training method for

functional analysis

* + Group training may be as effective as individual training

# Future Research

* Continue research in training all other FA component skills
* Researchers should report training time
* Training: Design of a functional analysis
* Training of all functional analysis component skills together

# Selected References

Beavers, G. A., Iwata, B. A., & Lerman, D. C. (2013). Thirty years of research on the functional analysis of problem behavior. *Journal of Applied Behavior Analysis*, 46, 1-21.

Campbell, J. M. (2003). Efficacy of behavioral interventions for reducing problem behavior in persons with autism: a quantitative synthesis of single-subject research. *Research in*

*Developmental Disabilities*, 24(2), 120-138.

Hanley, G. P., Iwata, B. A., & McCord, B. E. (2003). Functional analysis of problem behavior: A

review. *Journal of Applied Behavior Analysis*, 36, 147-185.