"Learn the Signs. Act Early." Update on System and Research Activities

Presenters

Catherine Rice, PhD (Moderator)

Centers for Disease Control and Prevention

Toni Whitaker, MD

Boling Center for Developmental Disabilities, TN Act Early Ambassador

Gail Chodron, MA

Waisman Center – WI Act Early Ambassador

Jennifer Burt, PhD

Munroe-Myer Institute of Genetics and Rehabilitation

Learn the Signs. Act Early.

- *Learn the Signs:*
  - Resources for monitoring key developmental milestones and "red flags" that can indicate concern

- *Act Early:*
  - Discuss Concerns
  - Proactive Screening (as appropriate)
  - Refer for evaluation and services
  - Find resources for early intervention and family support

It's time to change how we view a child's growth.

It's natural to measure your child's height and weight. But you should measure other ways your child is growing, too.

From birth to 5 years, there are milestones your child should reach in terms of how she plays, learns, speaks, and acts. A delay in any of these areas could be a sign of a developmental problem, even autism. The good news is, the earlier it's recognized the more you can do to help your child reach her full potential. Talk with a doctor or nurse about your child's total development.

www.cdc.gov/actearly

Learn the Signs. Act Early.

Learn the Signs. Act Early. Components

1. Health communication campaign

2. Act Early Initiatives

   - Act Early Ambassadors
   - State Teams

3. Research and evaluation

Health communication

- Aims to change perceptions about the importance of identifying developmental concerns early

- Promotes awareness of milestones, warning signs, the importance of acting early, and how to get help

- Gives parents, professionals tools to help track development

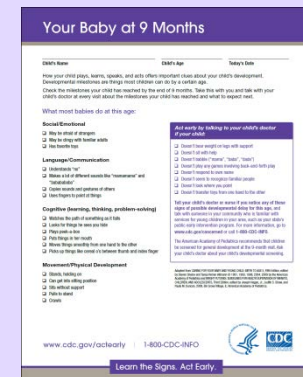# Examples of Tools & Resources

Milestones Brochure

sample milestones ages 6m-5y; how to get help

Milestones Checklists

ages 2m- 5y, warning signs; how to get help

Milestone Moments Booklet

All checklists ages 2m-5y, tips for promoting development, warning signs; how to get help
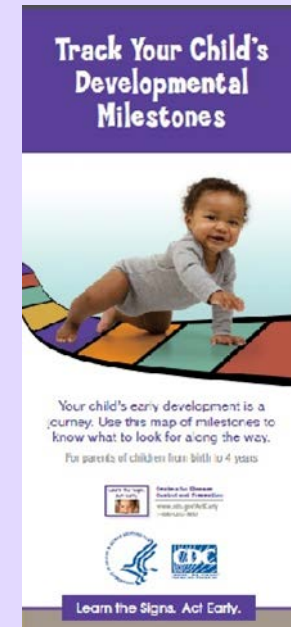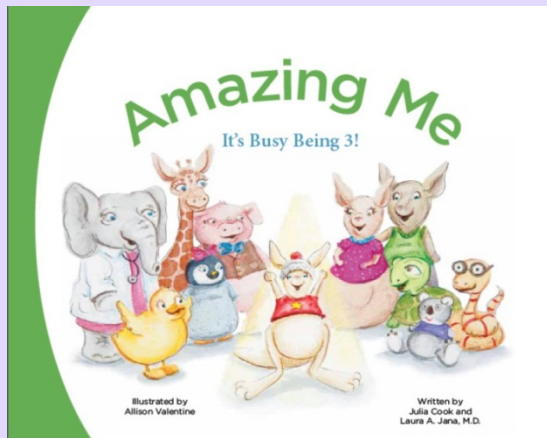

Learn the Signs. Act Early.

3 Ways to Get *Learn the Signs. Act Early.* Products

- ❑ **Download and print**
- ❑ **Order**
- ❑ **Customize**

Milestone Moments

Learn the Signs. Act Early.

You can follow your child's development by watching how he or she plays, learns, speaks, and acts.

Look inside for milestones to watch for in your child and how you can help your child learn and grow.

Track Your Child's Developmental Milestones

Your child's early development is a journey. Use this map of milestones to know what to look for along the way.

For parents of children from birth to 4 years

Learn the Signs. Act Early.

- • **www.cdc.gov/ActEarly**
- • **1-800-CDC-INFO**
- • ActEarly@cdc.gov

Amazing Me
It's Busy Being 3!

Illustrated by Allison Valentine

Written by Julia Cook and Laura A. Jana, M.D.

Learn the Signs. Act Early.

www.cdc.gov/ActEarly

Learn the Signs. Act Early.

Putting the information to use to improve early identification –

www.cdc.gov/ActEarly

ActEarly@cdc.gov

"Learn the Signs. Act Early." Ambassadors June 23, 2011

"Learn the Signs. Act Early." Ambassadors January 28, 2012

Toni Whitaker, MD
Tennessee Act Early Ambassador

Associate Professor Pediatrics
Developmental Pediatrics/Neurodevelopmental Disabilities

University of TN Boling Center for Developmental Disabilities
University of TN Health Science Center, Memphis

TN Act Early Autism Summit Team

- Committed group
  - Continuing quarterly meetings, central location

- Variety partner agencies
  - Academic (University LEND programs)
  - Education (Early Intervention, TN Dept Education)
  - Health/Allied Health (Physician groups, TN Dept of Health)
  - Community Agencies
  - Government (Governor's Council)

TN Act Early Autism Summit Team

- TN Dept Health, Maternal & Child Health Section
  - AMCHP State Systems Grant
    - LTSAE information and materials dissemination

- TN Disability Coalition
  - MCHB, HRSA State Planning Grant
    - Use of existing state team to organize, review, and plan for improved statewide services for children with ASD and other Developmental Disorders

Ambassador Activities

- CDC Autism Case Training Curriculum

- "Learn the Signs. Act Early." Autism education for early childhood providers

- Community awareness of Autism Spectrum Disorders

- Provision of LTSAE materials

Autism Case Training Curriculum

Autism Case Training Curriculum

- Incorporated ACT materials/modules into monthly Pediatric Resident training

- Hospital "Grand Rounds" presentation
  - Modules on Early Warning Signs, Screening, Communicating Concerns
  - Pediatric Faculty, Residents, Medical students, Allied Health (web archived for continuing education)

Autism Case Training Curriculum

- TN Dept of Health Nurse Clinician Training
  - Modules on Early Warning Signs, Screening, Communicating Concerns, Anticipatory Guidance
  - Creation of nursing protocols for developmental screening
  - Partners: TN chapter AAP, TN Dept of Health, UT Boling LEND, Vanderbilt LEND, TN Early Intervention System

- Invited to present at Univ of TN Pediatrics annual symposium for Pediatricians
  - Screening for Autism

LTSAE for Early Childhood Providers

- Presentations focused on awareness of developmental milestones, features of ASDs
- Audiences included:
  - TN Association for the Education of Young Children Annual Meeting
  - TN Early Childhood Summit Annual Meeting
  - TN Dept of Health/MCHB Home Visiting Program Staff (partners TN Dept of Health, UT Boling LEND, Vanderbilt LEND)
  - National Head Start Association Annual Meeting (partners Carter Consulting, Inc. and Porter Novelli for the National Center on Birth Defects and Developmental Disabilities, CDC)

Community Awareness

- **TN Act Early Team**
  - Planning Council with team partners

- **TN Dept Mental Health and Developmental Disabilities**
  - Advisory Panel for statewide "Best Practices Guidelines"
    - Collaboration with multiple professional institutions

- **Local public television segment on Autism**
  - Collaboration with local hospital system, Early Developmental Intervention agency

Highlights from…

Joann Yuen, EdD
Hawaii Act Early Ambassador

Associate Professor

Disability Studies at the University of Hawaiʻi

Community Health Screening

- Partners:
  - HI LEND program (with trainees), Pediatric and Family Medicine Physicians, Autism Grant (funding for training in developmental screening for Pediatricians)

- Community:
  - Impoverished encampments in remote, sparsely populated area southernmost Hawaii
    - Transient population, ~650
  - No utility services, no refrigeration except by limited-use generator, single public transportation route (twice daily), shared vehicles for workers

Community Health Screening

- Screening
  - Medical screening for children and adults
  - Developmental screening, M-CHAT for children
- Services
  - Implemented early intervention services for children with developmental concerns

INTEGRATING ACT EARLY MATERIALS IN HOME VISITS SUPPORTS MCH EARLY CHILDHOOD SYSTEMS PRIORITY

Gail Chodron, MA, WI Act Early Ambassador

Interdisciplinary Training Coordinator, WI LEND

Waisman Center UCEDD

Learn the Signs. Act Early.

www.cdc.gov/ActEarly

MCH Program Priorities for 2011-2015

Addresses 3 of 8 priorities identified through MCH 2010 needs assessment process:

- Increase the number of women, children, and families who receive **preventive screenings, early identification, and intervention.**

- Increase the number of women, men, and families who have knowledge of and skills to promote **optimal infant and child health, development, and growth.**

- Reduce **health disparities** for women, infants, and children, including those with special health care needs.

Need

- 0.98% of WI children age birth to 12 mos. served through Birth to 3, below target of 1.16%[1]

- 88% diagnosed with autism had documented developmental concern by 12 mos., yet median age of diagnosis 53 months[2]

- County programs need support to increase Birth to 3 referral and service rate in birth to 12 mos. age set

- Community providers identify need for quality, family friendly materials on child development and milestones

[1] WI 2009 Part C State Annual Perform. Report
[2] Autism and Developmental Disabilities Monitoring Network Surveillance Year 2006 Principal Investigators; Centers for Disease Control and Prevention. Prevalence of autism spectrum disorders—Autism and Developmental Disabilities Monitoring Network, United State, 2006. MMWR Surveill Summ. 2009;58(SS-10)

Project Overview

- Integrate "Learn the Signs. Act Early." (LTSAE) materials into two statewide programs serving at-risk families:
  - Prenatal Care Coordination (PNCC)
  - Maternal, Infant, and Early Childhood Home Visiting (MIECHV)

- Prioritized integration, statewide reach, and sustainability

- Assessed provider needs through focus group, online survey

- Developed training materials and technical assistance process

- Customized Milestone Moments and LTSAE growth charts

- Evaluated results through dissemination data and collecting provider feedback

Customization

Outcomes

- Curriculum on having conversations with families about child development and developmental concerns using Milestone Moments booklet integrated into existing trainings

- Distributed over 8,000 booklets and 5,300 LTSAE growth charts to PNCC and home visiting programs

- Other groups of early childhood professionals pursuing integration

  – Regional early childhood coalition integrating into public health department home visiting and other provider programs

  – Early childhood quality improvement system integration into statewide trainings providing YoungStar points

PNCC Providers Told Us...

- 97% (72) of respondents to Initial Survey provide services to families through other programs

- When asked if they share the same health education materials when serving families in different programs
  - 58% (41) of respondents "usually" do
  - 41% (29) of respondents "sometimes" do

- 70% of respondents to Follow-up Survey reported impact on conversations about child development and concerns

#	Answer	Bar	Response	%
1	Many more conversations are occuring		2	7%
2	More conversations are occuring		19	63%
3	No change in conversations has occurred		9	30%
	Total		30	

For More Information:

Gail Chodron
Project Team Lead

Waisman Center UCEDD & LEND
chodron@waisman.wisc.edu
608-890-0145

Project Team Members:

- Linda Hale, Project Team Co-Lead
  WI Title V Director & Family Health Section Chief

- Anne Bradford Harris, PI
  WI LEND Director

- Katie Gillespie, PNCC integration
  Statewide PNCC Coordinator

- Katy Murphy, MIECHV integration
  DHS Home Visiting Nurse Consultant

- Susan Kratz, Data Coordinator
  SPHERE State Administrator

Act Early Wisconsin

www.ActEarly.wisc.edu

An Evaluation of the Milestone Moments Booklet and Interactive Milestone Checklist with Child Care Providers

JENNIFER D. BURT, PH.D.

MUNROE MEYER INSTITUTE FOR GENETICS AND REHABILITATION-UNIVERSITY OF NEBRASKA MEDICAL CENTER

Importance of Parent Engagement

- Child well-being and health is developed within the context of the family.

- Early experiences may hold special significance in determining later outcomes as they set the course for the child's subsequent experiences with the environment (Appleyard et al., 2005; Brooks-Gunn, Denner, & Klebanov, 1995).

- Parenting behaviors such as warmth and sensitivity, support for autonomy, and active participation in learning throughout the first three years have been shown to enhance young children's socioemotional and cognitive development (NICHD Early Child Care Research Network, 2002).

Parental Knowledge of Child Development

- Parents with greater developmental knowledge tend to provide a higher-quality home environment than parents with less knowledge (Benasich & Brooks-Gunn 1996;Huang et al. 2005).

- Parents with greater knowledge of child development tend to provide more verbal and physical stimulation to their children, utilize less punitive discipline strategies (Morawska, Winters, & Sanders, 2009) and are generally more sensitive in interactions with their children (Dukewich et al. 1996; Huang et al. 2005).

- Mothers who have a more accurate estimate of infants' developmental milestones are more likely to talk, tell stories, and read to their babies. Mother's who are more knowledgeable and perceptive are more likely to structure an environment that is matched to the infant's level of development (Parks & Smeriglio, 1986;Stevens, 1984).

Why are Developmental Milestones Important?

- Developmental milestones are behaviors that most children can do by a certain age.

- They act as markers across the course of typical child development.

- Developmental milestones examine how a child learns, plays, speaks, and behaves at a specific age.

** All children develop at their own pace and some children will reach milestones at a slightly earlier or later time. **

Developmental Milestone Domains

- Social and Emotional

- Language and Communication

- Cognitive

- Movement and Physical

Purpose of Project

- Purpose
  - To understand how the "Learn the Signs. Act Early." Milestone Moments booklet (MM) and the Interactive Milestone Checklist (MC) can be used in a child care setting to:
    - increase childcare provider's knowledge of children's development,
    - as a tool to monitor children's development, and
    - help facilitate conversations about development including concerns they may have between parents and child care providers.

  - To understand how the "Learn the Signs. Act Early." materials could be modified to improve their effectiveness with child care providers and what level of training is needed to effectively use these materials with parents

Your Child at 1 Year

Child's Name   **Child's Age**   **Today's Date**

How your child plays, learns, speaks, and acts offers important clues about your child's development. Developmental milestones are things most children can do by a certain age.

Check the milestones your child has reached by his or her 1st birthday. Take this with you and talk with your child's doctor at every visit about the milestones your child has reached and what to expect next.

What most children do at this age:

Social/Emotional

- ❑ Is shy or nervous with strangers
- ❑ Cries when mom or dad leaves
- ❑ Has favorite things and people
- ❑ Shows fear in some situations
- ❑ Hands you a book when he wants to hear a story
- ❑ Repeats sounds or actions to get attention
- ❑ Puts out arm or leg to help with dressing
- ❑ Plays games such as "peek-a-boo" and "pat-a-cake"

Language/Communication

- ❑ Responds to simple spoken requests
- ❑ Uses simple gestures, like shaking head "no" or waving "bye-bye"
- ❑ Makes sounds with changes in tone (sounds more like speech)
- ❑ Says "mama" and "dada" and exclamations like "uh-oh!"
- ❑ Tries to say words you say

Cognitive (learning, thinking, problem-solving)

- ❑ Explores things in different ways, like shaking, banging, throwing
- ❑ Finds hidden things easily
- ❑ Looks at the right picture or thing when it's named
- ❑ Copies gestures
- ❑ Starts to use things correctly; for example, drinks from a cup, brushes hair
- ❑ Bangs two things together
- ❑ Puts things in a container, takes things out of a container
- ❑ Lets things go without help
- ❑ Pokes with index (pointer) finger
- ❑ Follows simple directions like "pick up the toy"

Movement/Physical Development

- ❑ Gets to a sitting position without help
- ❑ Pulls up to stand, walks holding on to furniture ("cruising")
- ❑ May take a few steps without holding on
- ❑ May stand alone

Act early by talking to your child's doctor if your child:

- ❑ Doesn't crawl
- ❑ Can't stand when supported
- ❑ Doesn't search for things that she sees you hide.
- ❑ Doesn't say single words like "mama" or "dada"
- ❑ Doesn't learn gestures like waving or shaking head
- ❑ Doesn't point to things
- ❑ Loses skills he once had

Tell your child's doctor or nurse if you notice any of these signs of possible developmental delay for this age, and talk with someone in your community who is familiar with services for young children in your area, such as your state's public early intervention program. For more information, go to **www.cdc.gov/concerned** or call **1-800-CDC-INFO**.

www.cdc.gov/actearly | 1-800-CDC-INFO

Learn the Signs. Act Early.

Your Child at 1 Year

What children do at this age – and how you can help their development.

Social/Emotional

- Is shy or nervous with strangers
- Cries when mom or dad leaves
- Has favorite things and people
- Shows fear in some situations
- Hands you a book when he wants to hear a story
- Repeats sounds or actions to get attention
- Puts out arm or leg to help with dressing
- Plays games such as "peek-a-boo" and "pat-a-cake"

Language/Communication

- Responds to simple spoken requests
- Uses simple gestures, like shaking head "no" or waving "bye-bye"
- Makes sounds with changes in tone (sounds more like speech)
- Says "mama" and "dada" and exclamations like "uh-oh!"
- Tries to copy words
- Begins to talk in a way that is like a conversation

How you can help your child learn and grow

- → Give your child time to get to know a new caregiver. Bring a favorite toy, stuffed animal, or blanket to help comfort your child.
- → In response to unwanted behaviors, say "no" firmly. Do not yell, spank, or give long explanations. A time out for 30 seconds to 1 minute might help redirect your child.
- → Give your child lots of hugs, kisses, and praise for good behavior.
- → Spend a lot more time encouraging wanted behaviors than punishing unwanted behaviors (4 times as much encouragement for wanted behaviors as redirection for unwanted behaviors).
- → Talk to your child about what you're doing. For example, "Mommy is washing your hands with a washcloth."
- → Read with your child every day. Have your child turn the pages. Take turns labeling pictures with your child.
- → Build on what your child says or tries to say, or what he points to. If he points to a truck and says "t" or "truck," say, "Yes, that's a big, blue truck."

Cognitive (learning, thinking, problem-solving)

- ❑ Explores things in different ways, like shaking, banging, throwing
- ❑ Finds hidden things easily
- ❑ Looks at the right picture or thing when it's named
- ❑ Copies gestures
- ❑ Puts things in a container, takes things out of a container
- ❑ Bangs two things together
- ❑ Starts to use things correctly; for example, drinks from a cup, brushes hair
- ❑ Lets things go without help
- ❑ Pokes with index (pointer) finger
- ❑ Follows simple directions like "pick up the toy"

Movement/Physical Development

- ❑ Gets to a sitting position without help
- ❑ Pulls up to stand, walks holding on to furniture ("cruising")
- ❑ May take a few steps without holding on
- ❑ May stand alone

How you can help your child learn and grow

- → Give your child crayons and paper, and let your child draw freely. Show your child how to draw lines up and down and across the page. Praise your child when she tries to copy them.
- → Play with blocks, shape sorters, and other toys that encourage your child to use his hands.
- → Hide small toys and other things and have your child find them.
- → Ask your child to label body parts or things you see while driving in the car.
- → Sing songs with actions, like "The Itsy Bitsy Spider" and "Wheels on the Bus." Help your child do the actions with you.
- → Give your child pots and pans or a small musical instrument like a drum or cymbals. Encourage your child to make noise.
- → Provide lots of safe places for your toddler to explore. (Toddler-proof your home. Lock away products for cleaning, laundry, lawn care, and car care. Use a safety gate and lock doors to the outside and the basement.)
- → Give your child push toys like a wagon or "kiddie push car."

Act early by talking to your child's doctor if your child:

- ❑ Doesn't crawl
- ❑ Can't stand when supported
- ❑ Doesn't search for things that she sees you hide
- ❑ Doesn't point to things
- ❑ Doesn't learn gestures like waving or shaking head
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- ❑ Loses skills he once had

Tell your child's doctor or nurse if you notice any of these signs of possible developmental delay for this age, and talk with someone in your community who is familiar with services for young children in your area, such as your state's public early intervention program. For more information, go to **www.cdc.gov/concerned** or call **1-800-CDC-INFO**.

Methods

- All participants were teachers or parents at Easter Seals Child Development Centers in North Carolina or Florida.

- Teachers participants (N =10)
  - 100% female
  - 47% associate's degree, 30% bachelor's degree, 12 % some graduate training, 12% graduate degree
  - Years teaching ranged from 1-30 years with a mean of 12 years
  - racially and ethnically diverse : 41% white, 35% African American, 24% Latino
  - A total of 17 teachers consented to participate but only 10 completed all data collection

- Parent participants (N = 11)
  - 82% female
  - 46% had a high school diploma, 36% had a bachelor's degree, and 18% had graduate school training
  - racially and ethnically diverse : 46% white, 36% African American, 18% Latino
  - 54 % mothers, 18 % fathers, 27 % "other"
  - 27% had a child with an identified disability

Methods

- Procedures
  - Participating Sites were assigned to 3 arms of treatment
    - Milestone Moments Booklet (MM)
    - Interactive Milestone Checklist (MC)
    - Control condition

  - Material Drop
    - All teacher participants completed a pre- and post- questionnaire
    - All parents completed a questionnaire
    - Participants in the MM and MC groups received the materials (MM or MC) and a brief orientation for how to use the materials.

Methods

- Procedures (cont)
  - Focus Groups
    - Separate focus groups occurred at the end of the study with all child care providers (lead teachers) and parents

Study Design

- This study used a mixed method design. Data collection included:
  - Focus-group interviews
  - Pre-and-post survey

Azjen's (1991) Theory of Planned Behavior

Source: Ajzen (1991)

Theoretical Framework/Focus Group

Thinking about monitoring child development, based on Theory of Planned Behavior (Ajzen, 1991)

- **Knowledge and attitudes** (e.g., "How do you communicate with parents/teacher?" "How do you get information about child development?")

- **Subjective Norm** (e.g., "Have you discussed the child's behavior or development with parent/teacher?" "What topics do you communicate about ?")

- **Perceived Control** (e.g., "If you had concerns about the child, what would you do?")

- **Intentions and behavior** (e.g., "How do you monitor the child's development?" "How did you use the MM/MC materials?")

Themes Identified

- Topics of communication between parents and teachers

- Learn about and monitor child development

- Mode of communication

- Response to concerns or delay

- Challenges to meeting children's developmental needs

- Parent-teacher perceptions of responsiveness and trust

THEME	SUBTHEME	SUBTHEME
Theme 1: Topics of Communication	Child Development	Progress on Goals
	Concerns or Delays	Details about the Child's Day
Theme 2: Mode of Communication	Scheduled Meetings	Informal Meetings
	In writing	Phone calls
	Reports	
Theme 3: Learn about and Monitor Child Development	Formal Meetings	Observations
	Data-based	Other Professionals (school)
	Other Professionals (community)	Peers
	Media	
Theme 4: Response to Concerns or Delay	Talk to Parent	Talk to Teacher
	Talk to Physician	Talk to Director
	Consult with Therapist (school)	
Theme 5: Challenges to Meeting Needs	Meeting Diverse Needs	Prepare for Next Milestone
	Behavior Concerns/Classroom Management	Class Ratios
	Lack of Credibility/Respect	Center Policies
	Lack of Knowledge on Child Development	Access to Services
Theme 6: Parent-teacher Perceptions of Relationship	Responsive	Non-responsive
	Trust	Distrust

THEME	SUBTHEME	SUBTHEME
Theme 7: Methods for Sharing Materials	Invite Parent to Meet and Introduce Materials	Phone Call to Introduce Materials
	Send Materials Home	
Theme 8: Response to Materials	Reassuring	Recommend to All New Parents
	Monitor Development/Identify Delay	Use to Understand Development/Play
	Facilitates Conversation between Parents and Teachers	

Distribution of Themes for Teachers
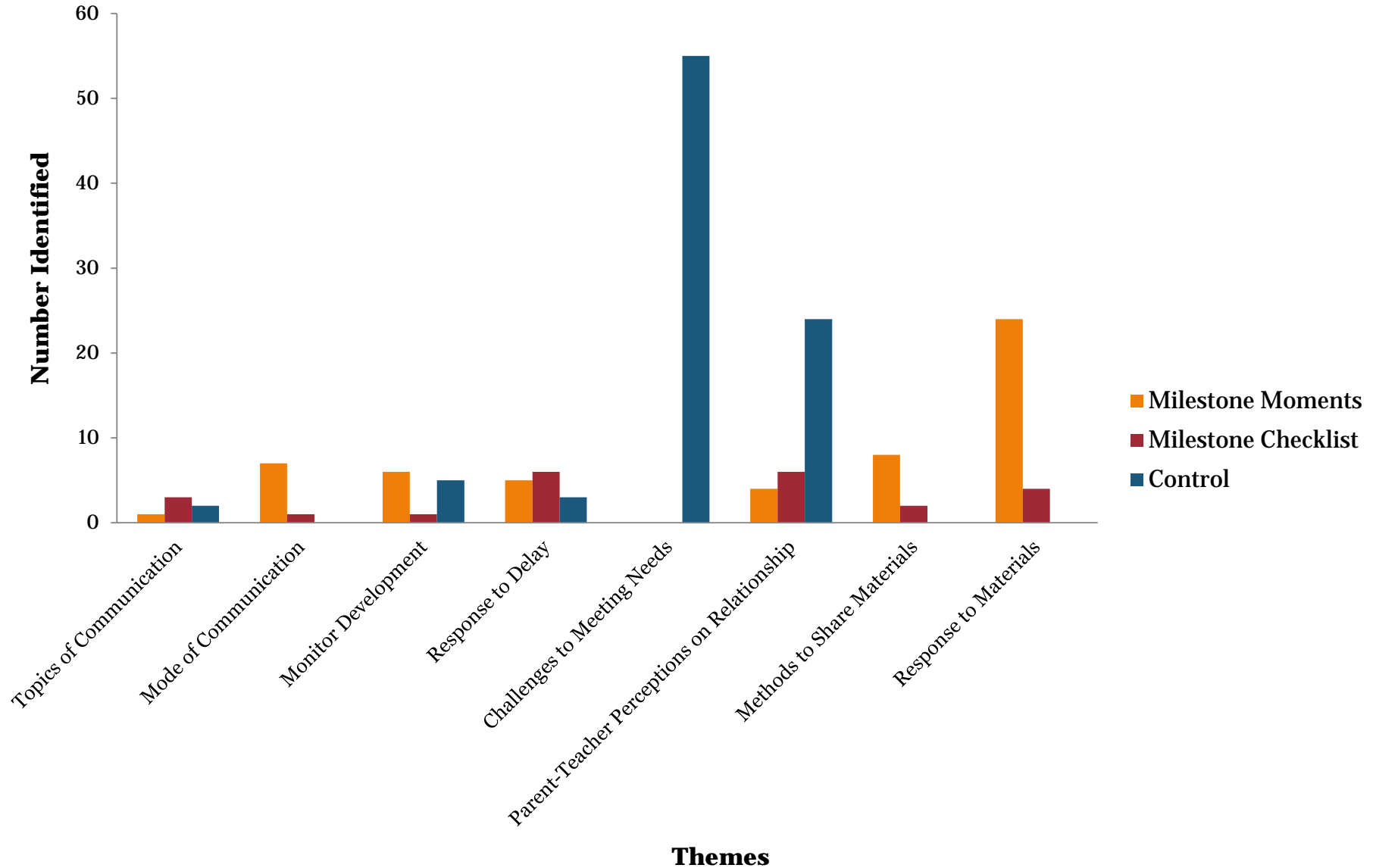
Distribution of Themes for Parents
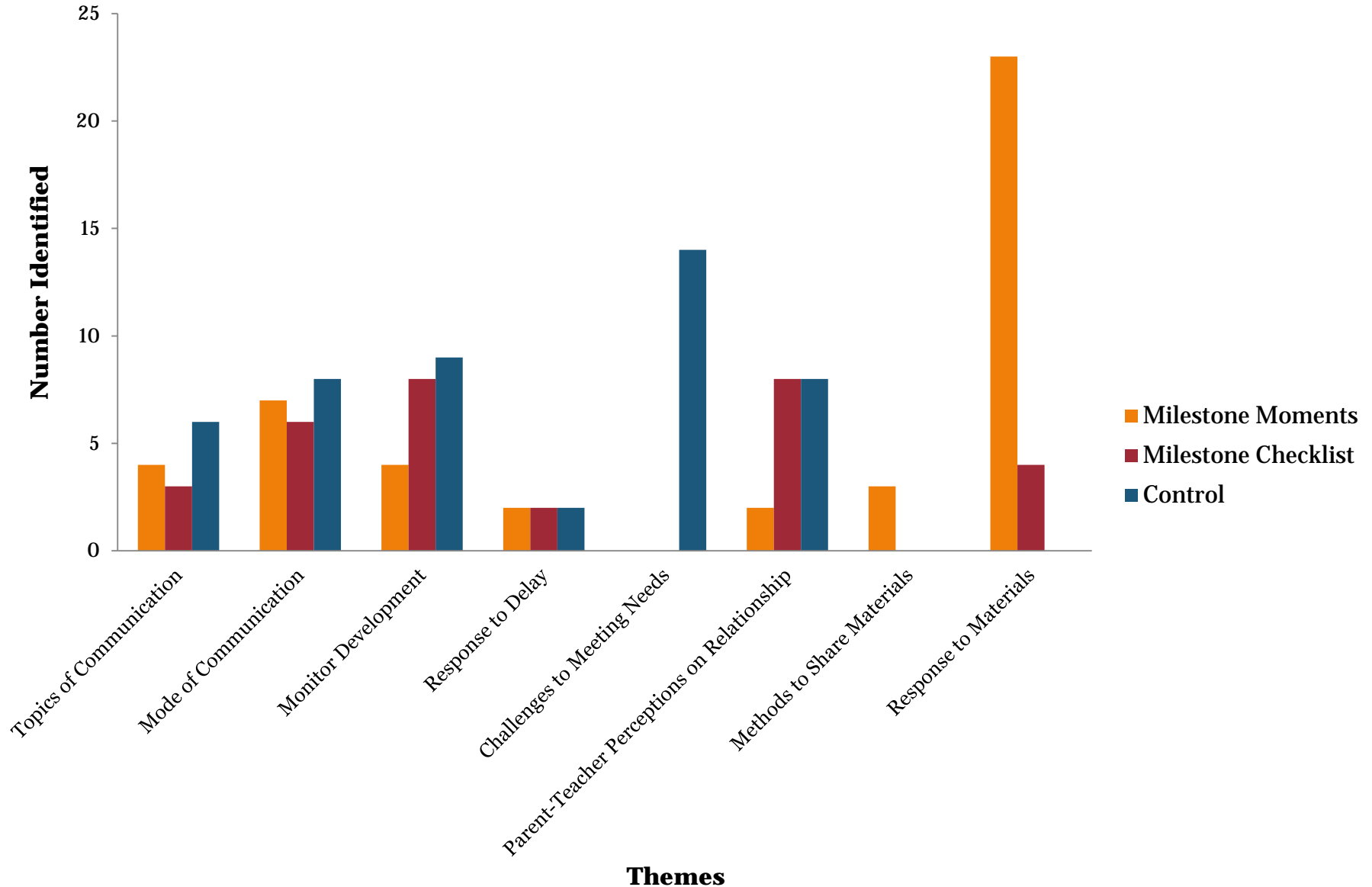
Topics of Communication for Teachers (number identified)	Milestone Moments	Milestone Checklist	Control
Child development	1	1	0
Progress on goals	0	0	0
Concerns/Delays	0	0	1
Details about the day	0	2	1

Topics of Communication for Parents (number identified)	Milestone Moments	Milestone Checklist	Control
Child Development	2	0	1
Progress on goals	0	0	2
Concerns/Delays	1	1	3
Details about the day	1	2	0

Mode of Communication for Teachers (number of responses identified)	Milestone Moments	Milestone Checklist	Control
Scheduled meetings	1	0	0
Informal meetings	4	0	0
In writing	1	0	0
Telephone	1	0	0
Reports	0	1	0

Mode of Communication for Parents (number of responses identified)	Milestone Moments	Milestone Checklist	Control
Scheduled meetings	0	0	2
Informal meetings	1	3	2
In writing	0	2	4
Telephone	2	0	0
Reports	4	1	0

Learn About and Monitor Development for Teachers (number of responses identified)	Milestone Moments	Milestone Checklist	Control
Formal meetings	1	0	0
Observations	0	0	1
Data-based	4	1	0
Other professionals (school)	1	0	4
Other professionals (community)	0	0	0
Peers	0	0	0
Media	0	0	0

Learn About and Monitor Development for Parents (number of responses identified)	Milestone Moments	Milestone Checklist	Control
Formal meetings	0	0	0
Observations	2	0	1
Data-based	0	0	1
Other professionals (school)	0	7	2
Other professionals (community)	1	0	1
Peers	0	0	2
Media	1	0	2

Response to Delay for Teachers (number of responses identified)	Milestone Moments	Milestone Checklist	Control
Discuss with parent	2	1	0
Discuss with teacher	NA	NA	NA
Discuss with physician (or other professional)	2	0	2
Discuss with the director	1	1	0
Discuss with other professionals at the school	0	4	1

Response to Delay for Parents (number of responses identified)	Milestone Moments	Milestone Checklist	Control
Discuss with parent	NA	NA	NA
Discuss with teacher	1	0	0
Discuss with physician (or other professional)	1	0	0
Discuss with the director	0	0	0
Discuss with other professionals at the school	0	2	0

Challenges to Meeting Needs for Teachers (number of responses identified)	Milestone Moments	Milestone Checklist	Control
Meeting diverse needs	0	0	6
Prepare for next milestone/classroom	0	0	4
Managing behavior in the classroom	0	0	7
Class ratios	0	0	9
Lack of credibility and respect	0	0	15
Center policies	0	0	11
Lack of knowledge on child development	0	0	2
Access to services	0	0	1

Challenges to Meeting Needs for Parents (number of responses identified)	Milestone Moments	Milestone Checklist	Control
Meeting diverse needs	0	0	0
Prepare for next classroom	0	0	0
Managing behavior in the classroom	0	0	0
Class ratios	0	0	0
Lack of credibility and respect	0	0	0
Center policies	0	0	0
Lack of knowledge on child development	0	0	0
Access to services	0	0	14

Perceptions of the Parent-Teacher Relationship for Teacher (number of responses identified)	Milestone Moments	Milestone Checklist	Control
Responsive	1	3	3
Non-responsive	0	2	10
Trust	3	1	2
Distrust	0	0	9

Perceptions of the Parent-Teacher Relationship for Parents (number of responses identified)	Milestone Moments	Milestone Checklist	Control
Responsive	1	2	0
Non-responsive	0	0	5
Trust	1	6	0
Distrust	0	0	0

Methods to Share Materials for Teachers (number of responses identified)	Milestone Moments	Milestone Checklist	Control
Invite parents to meet and introduce the materials	6	0	NA
Introduce materials by telephone	2	0	NA
Send materials home	0	2	NA

Methods to Share Materials for Parents (number of responses identified)	Milestone Moments	Milestone Checklist	Control
Invite parents to meet and introduce the materials	3	0	NA
Introduce materials by telephone	0	0	NA
Send materials home	0	0	NA

Response to Materials for Teachers (number of responses identified)	Milestone Moments	Milestone Checklist	Control
Reassuring	3	0	NA
Recommend for all new parents	1	0	NA
Monitor development and identify delay	6	3	NA
Understand development and play	6	0	NA
Facilitate communication between teachers and parents	8	1	NA

Response to Materials for Parents (number of responses identified)	Milestone Moments	Milestone Checklist	Control
Reassuring	2	1	NA
Recommend for all new parents	3	0	NA
Monitor development and identify delay	7	1	NA
Understand development and play	7	2	NA
Facilitate communication between teachers and parents	4	0	NA

Teacher Responses to Materials		
(rated on a 5-point Likert scale ranging from 5 = "Strongly Agree" to 1 = "Strongly Disagree")	Milestone Moments M (SD) N = 2	Milestone Checklist M (SD) N = 3
I feel comfortable giving my families the *Milestone Moments/Milestone Checklist*.	5.00 (.00)	4.58 (.72)
The *Milestone Moments/Milestone Checklist* has increased my knowledge of early childhood development.	5.00 (.00)	4.58 (.72)
The checklist has raised my awareness about the importance of early childhood developmental milestones.	5.00 (.00)	4.58 (.72)
Overall the checklist has helped improve the partnerships I share with the families I serve.	5.00 (.00)	4.58 (.72)
The checklist has increased my appreciation of early childhood development.	5.00 (.00)	4.58 (.72)
I have a greater appreciation for the children I serve after working with the *Milestone Moments/Milestone Checklist* booklet.	5.00 (.00)	4.17 (.72)
The checklist is straightforward and easy to understand.	5.00 (.00)	4.58 (.72)
The "how you can help your child learn and grow" activities offer useful suggestions for my families.	5.00 (.00)	NA
I would recommend the *Milestone Moments/Milestone Checklist* to other early childhood educators.	5.00 (.00)	4.58 (.72)
I feel I can be effective in helping parents seek out services when they have concerns about their child's development.	5.00 (.00)	4.58 (.72)

Parent Responses to Materials		
(rated on a 5-point Likert scale ranging from 5 = "Strongly Agree" to 1 = "Strongly Disagree")	Milestone Moments M (SD) N = 3	Milestone Checklist M (SD) N =4
I feel comfortable talking about the *Milestone Moments/Milestone Checklist* with my Early Childhood Educator.	5.00 (.00)	4.50 (.57)
The *Milestone Moments/Milestone Checklist* has increased my knowledge of early childhood development.	4.67 (.58)	3.5 (.57)
The booklet has raised my awareness about the importance of early childhood developmental milestones.	4.67 (.58)	3.50 (.57)
Overall the booklet has helped improve the partnership I share with my Early Childhood Educator.	4.33 (1.15)	3.25 (.50)
The booklet has increased my appreciation of early childhood development.	4.67 (.58)	3.50 (.57)
I have a greater appreciation for my child(ren)'s development after going over the *Milestone Moments/Milestone Checklist* with my Early Childhood Educator.	4.67 (.58)	4.25(.50)
The booklet is straightforward and easy to understand.	5.00 (.00)	4.25(.50)
The "how you can help your child learn and grow" activities offer useful suggestions for working with my child(ren).	4.67 (.58)	NA
I would recommend the *Milestone Moments/Milestone Checklist* to other families.	4.67 (.58)	4.00 (.00)
I can seek out services on my own if I am concerned about my child's development.	5.00 (.00)	4.50 (.57)

Discussion

- Overall, parents and teachers in both the Milestone Moments and Milestone Checklist condition reported that they were "satisfied" with the materials on the questionnaire and in focus groups.

- Parents and teachers in the Milestone Moments condition reported greater satisfaction with the materials than the Milestone Checklist condition on the questionnaire.

- Focus group data indicated that parents and the teachers in the Milestone Moments condition discussed the materials more frequently than the Milestone Checklist condition.

Shared Materials

Milestone Moments (8, 2)

- Contacted all families and asked them to come in and meet to go over materials.
- Showed materials to parents, explained where child is at and how to use book.
- Called any parents who could not come in and explained materials on the telephone.

Milestone Checklist (3, 0)

- Sent the materials home in the back pack.

Discussion- "Reassuring"

Milestone Moments (3, 2)

- " Yeah. One of my parents, she has autistic child in my program, but she also has one newborn at home. So, she was (indiscernible) that I gave her that book, because she was very -- a little concerned about the newborn, you And after that, she said that she read, like, one month and another, and she said that everything okay at this level for -- with the baby. So, she was happy."

Milestone Checklist (0, 1)

- "As a parents it's –- you always aren't –- well sometimes you're looking for the best and sometimes you're actually extra nervous about it as well. The checklist helped— confirmed my child was doing what she should."

Should be Shared with New Parents"

Milestone Moments (1, 0)	Milestone Checklist (3,0)
• "And they recommend -- One of my parents, she said she would recommend, for sure, for all the parents who have children that are not in our school. She would recommend it because she said it very, very helpful."	
• "What I put on the form was that I think that all moms, when they give birth, they should be given this"	

Use to Monitor Development

Milestone Moments (6, 3)

- "Because even though I have three kids, you kind of forget or, you know, and you should look to see that your kids are at the right level and doing the things that they're supposed to at their age. You know, like, one of the things that I know my son is supposed to do when they're two -- 'cause he's already done -- I've already checked off all the things it says for 18 months, so we started working on the things for two years. And one of the things is, he's supposed to be able to jump, and he did that yesterday, so I checked it off."

Milestone Checklist (7, 1)

- "So I like getting stuff like this to see, from somebody elses point of view, where she is and, like I said, even knowing what kids are supposed to do at certain ages, you still –- it's nice to see it in black and white like –- and this gives me –- I like that she was kind of in between two stages because I like being able to look at the 9-month one and think, like, okay, in the next two months these are the things that she kind of should start to be doing, so that helpful to kind of look ahead and see too. Yeah, I like getting stuff like this."

Use to Understand Development

Milestone Moments (6, 0)

- "I didn't have any feedback about, like, for the book to, like, no. All of mine said that the book was very helpful, was very ni- -- very good, was really great. All the feedback that I have are positive. I don't have any negative feedback. They are very happy with the book, because last -- I told you, they are having, like, new concepts, new vocabulary about how their child is not doing something or is doing something, you know, that they haven't before. They are very happy with the book."

Milestone Checklist (7, 2)

- "I got excited when I —- I didn't know that they were a part of this, but I saw them in the infant room and I got excited because, like I just said, I like seeing things like this from somebody elses' perspective. Because I can look at my baby and see what she doesn't, but sometimes as, you know, as a parent you don't know if you're kind of making up that they do something because you're their mom and you want to see them, you know, like, I like having someone (indiscernible), you know, sometimes I'm like, oh yeah she's totally doing that, and they're like, okay, no she's not.

Use to Facilitate Communication

Milestone Moments (8,1)

- "When you see what they're supposed to be doing, you ask, okay, what are the goals that you have? What goals have you set? What have you seen? Because, for example, yesterday it was just by coincidence I saw him jumping, you know. But normally he's, I mean, he's with his teacher, you know. So, she'll tell me, no, like, he did this, I saw him do this. And then, you know, so that open communication. You know where he's supposed to be at so you -- so that, you know, you're not lost when you talk to the teacher."

- " Maybe they speak more like (indiscernible) about child development. Yeah. Yeah, except when they talk to us now, they, like, mention or use more specific words or areas that they didn't"

Milestone Checklist (4,2)

- "Yeah, just keep a file on it. And, you know, we might bring it to a parents attention, you know- show them if, you know, this child is not saying more than two words. "

Control Group Recommendations

- *Parents*
  - Requested more brochures related to child development and how to help their child learn.

  - Specifically, they requested brief "bite size" information about child development.

- *Teachers*
  - Teachers in the control condition would like fact sheets on developmental milestones to share with parents before well-child visits.

  - Teachers in the control condition also thought it would be helpful if parents had a conference with them after they completed the materials.

Recommendations- Milestone Checklist

- "I think a lot of times, like, and I know that this is not just a quick, simple, easy thing, but with things like this, it's like the parents get the information and they're like, okay, well that is what my child is or isn't doing, but then what do I –- what do I do so, I think sometimes having things attached to like, you know, some activities, like, well if you're child is doing this here's some, you know, even if it's just simple, you know, not things that you have to create, but I think that a lot of parents don't understand the whole learn through play concept. And like, here's some things that you can do just, you know, when you're driving in the car, or when you're, you know, fixing dinner, these are some things that you can do to kind of help move along to the next level."
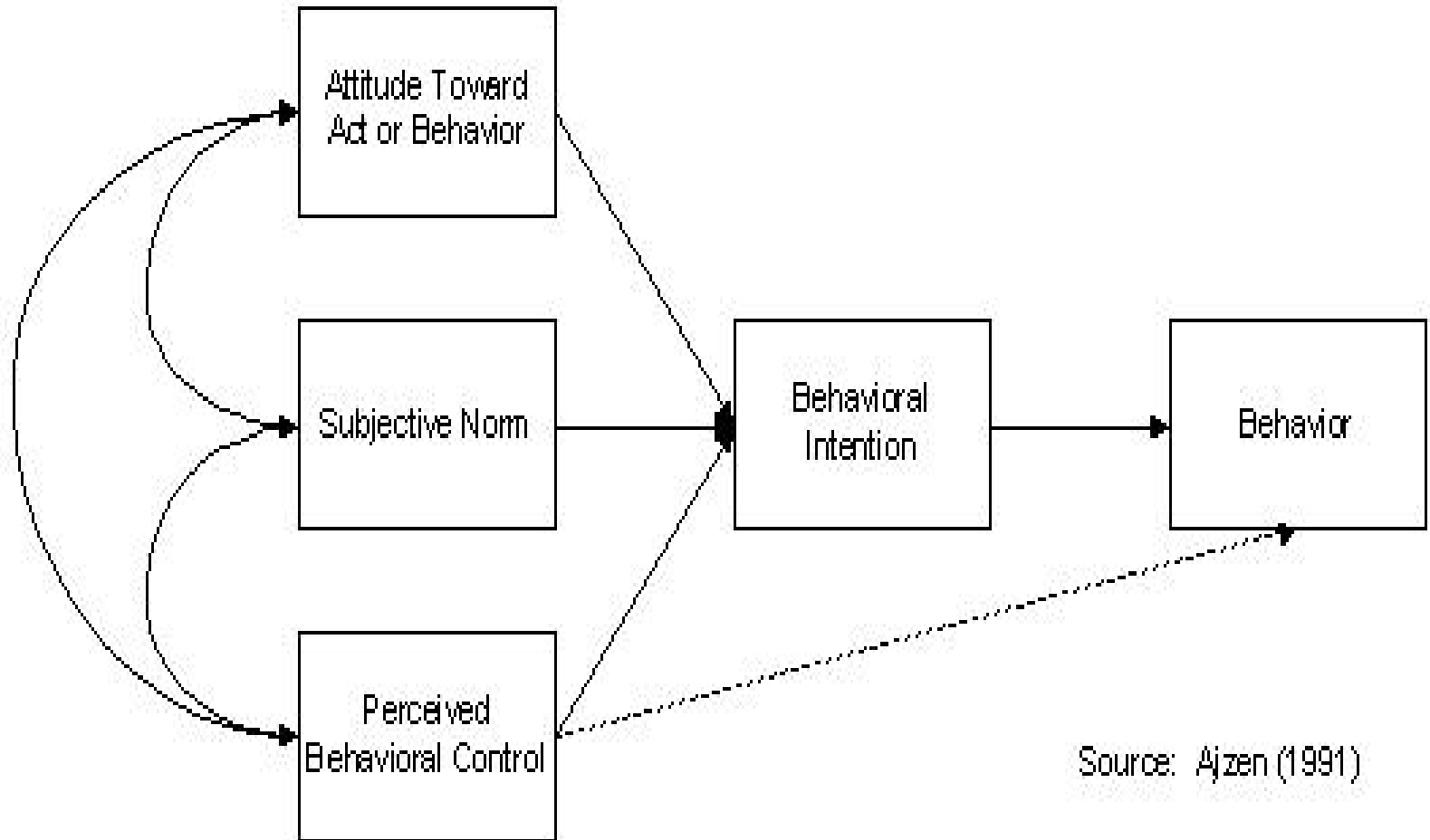
Recommendations for Materials

- Some of the examples in the MM/MC materials were specific to home or school. Teachers and parents recommended using examples observed in both environments.

- Some milestones included more than 1 example per line. Recommended only 1 example to simplify.

- Some milestones were redundant between ages.

- Milestone Moments booklet should be personalized for each child.

- Should include local telephone numbers for assistance if delays are identified.

Recommendations for Training

- Teachers in the Milestone Moments condition recommended that parents receive training on child development and monitoring developmental milestones

- Teachers in the Milestone Moments condition recommended that the book is introduced by teachers to each family when they begin at the center. The introduction should include showing the contents of the book, a description of the milestones, and evaluating current milestones.

- Teachers in the Milestone Moments and Milestone Checklist condition did not believe teachers needed any training on child development or how to use the materials.

- Teachers did not anticipate that parents would complete on-line trainings. Live training was recommended.

Azjen's (1991) Theory of Planned Behavior

Recommendations for Training with Teachers

- Parents in the Milestone Moments condition worked within an environment that encouraged them to speak with teachers both formally (scheduled meetings) and informally about child development, concerns, and goals.

- Barriers to addressing developmental needs appeared to be a "lack of credibility" and center policies that impede communication about concerns.

- Training should target child care center administrators, as well as teachers to ensure that the environment is conducive to increasing conversations about child development and how to respond to potential delays.

Recommendations for Training with Parents

- Provide materials when a child begins at the center.

- Sit down with family to describe the contents of the book, how to use it to monitor child development, and describe how it can be used to facilitate communication between caregivers and professionals.

- Teachers should continue to use Milestone Checklists with child at each milestone and share with the family to continue conversations about child development.

Learn the Signs. Act Early. materials can be found at:
http://www.cdc.gov/ncbddd/actearly/freematerials.html

Jennifer Burt, Ph.D.
Munroe Meyer Institute for Genetics and Rehabilitation-
University of Nebraska Medical Center
Omaha, Nebraska
jburt@unmc.edu